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For the Photographer and Kinematographer

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Why I Am A Pictorial Photographer

(Number Thirty-Three)

L. H. LONGWELL

MY experience with photography dates back to my boyhood days. At first it shared interest with a stamp collection; later, with a wireless set; but regardless of my other hobbies, "picture fixin' " was never neglected.

My equipment was the usual youngster's outfit—a Brownie camera, developing tank, printing frame, and soup plates for trays. Not much—but the source of a great deal of fun, and some terrible messes.

Looking through some old albums filled with these early pictures, I can't help remarking about the awful prints. It is surprising that they can be recognized as photographs at all. However, I see a constant improvement as I look through the pages to later years.

All through my school days and the first few years after school, I still messed with "picture fixin' ". These later years saw the addition of a folding camera and an enlarger to the equipment.

My first attempts at pictorial photography were "shots" of the pretty scenes that attracted me, but which turned out so disappointingly after they were made. The hopeless enlargements I produced did little to improve them. Nevertheless, I was having a lot of fun making pictures of this, that, and the other. I have never outgrown this love of making a picture of anything and everything that comes my way, even though I may suspect that the results will not be worth the trouble.

After some years of this, someone suggested that I take a course in a local school of photography. This I did. Whether I learned enough to justify the expense or not I do not know; but at least it broke the ice for me and led to my first job as a "professional photographer". Now that I was a full-fledged "professional", I decided that it was about time that I improved my standing as an amateur; so I joined the Fort Dearborn Camera Club. Here, under the direction of Ralph Hawkins, I began to learn the rudiments of composition and develop what latent ability I had along pictorial lines.

I must at this point say that I have learned more and done more as an amateur than as a professional. It is the amateur who has put photography where it is today. The amateur's demand for better equipment, new methods, and better quality of supplies has brought improvements we would never have seen otherwise. The average professional of a few years ago was quite content with his equipment and the quality of work produced, and had no particular desire to change either. I fully believe that the rise of pictorial photography has done more to improve photography in general than any other factor.

Last summer, I visited the convention of the Photographers' Association of America held in Milwaukee. Looking through the commercial exhibit, I could not help but notice the great number of prints that would do justice to any salon.

But to go on. After about a year of learning under Ralph Hawkins, I submitted my first prints to a salon, with gratifying success. My good fortune in turning out acceptable salon material has continued, although in the last year I have produced fewer salon prints than usual. I do not know whether my pictorial ability, such as it is, has been just a flash in the pan, or whether the subject mat-

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ter that interested me once no longer does so. I have noticed a decided falling off of the landscape type of picture, and a strong attraction for the unusual. I get infinitely more pleasure out of making the picture that is just a little different than I do in making a landscape. Perhaps this accounts for the fewer number of prints. I have received much good-natured "razzing" about some of my so-called "crazy stuff"; but I am out for whatever fun I can get out of photography, and I have no intention of changing my style.

It is an expensive hobby, is pictorial photography; but it is well worth it to look through my portfolio of prints and see such tangible results of the perfect hobby. The people I have met, the things I have learned, the pictures I have seen, and the prints I have made have all aided in making the last few years very much worth while. That, in essence, is why I continue to be a pictorial photographer.

The Camera Lies

FRED E. KUNKEL

WHEN we pose for a picture, we try to turn the sunny side up. The cameraman tries to catch us in our happiest mood. We are so accustomed to looking at ourselves in the mirror, and seeing our best profile, that occasionally we are quite shocked when a camera exposes a view to which we are not quite accustomed. The camera lies.

The truth of the matter is, however, that the camera doesn't lie; it merely turns our conceit inward. During all the years that we hold converse with the mirror, from childhood to old age, we are naturally only cognizant of our best-looking appearance. But should not the camera really tell the truth? Of course, as human beings, we all love to be flattered; but does flattery mold character?

What would you think of the picture of Lincoln without his sunny side up—with changes and corrections made, with warts and lines removed? Would you still think it a likeness of Abe Lincoln?

No, when we see a photograph of "Honest Abe", we prefer to see an outline of rugged character, of strength of will, of dominating personality. The camera tells the truth to Abe. He is not sensitive. He knows his own rugged worth, his inherent value, his deep sense of right and wrong, with justice for all, humaneness and kindness toward his fellow men the world over. We glance at a true reproduction of Lincoln's face and immediately detect there strong character and inflexible fidelity to his trust, faith in his fellow men—a faith that, although some may go wrong and some may fall by the wayside, nevertheless the law of human averages far outweighs the occasional disaster which overwhelms the frailties of mankind.

Fine portraits are fine flatteries, yet we must have them. Our conceit will not admit otherwise. Photography today is a fine art. We expect much of it. We talk about proof retouching that has to be done before we will accept the picture. We want this changed and that changed. We are not satisfied with ourselves as the camera paints us. But is not the camera really an object lesson in life? Do we not occasionally need to be shocked out of our self-imposed conceit? Should we ask changes and corrections which cannot easily be made when we ought to know that anything except minor changes will destroy our own naturalness and likeliness, something which should not be spoiled, something which enables others to look at us and say, "How true to life!"

But no! small shadows, lines, and wrinkles must be removed. The cheeks may be too full, the neck may not have the proper proportion, our shoulders may show us that we are inclined to stoop, our arms may look too long, the figure should be reduced, the mouth should be shut, the corners of the mouth should not twitch.

But is not the portrait, even though only in proof form, an object lesson which we may well view and say to ourselves: "We are not perfect—how can we obtain a more perfect state?"

But delusion is not for us. Illusion is a part of our everyday life. We like to dream of things that are not and probably never will be. Yet the satisfaction which comes from dreaming and the pleasant sensation which comes from drinking at the wells of illusion shape our lives. No, the camera doesn't lie.

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A NEW ENGLAND OX-TEAM — S. TOPALIAN

Pictures and Parnassus

HAROLD W. COLE

WE have had enough of water-lilies on our salon walls! Do you really think so? Someone made such a public sally not long since; but that doesn't mean that we must accept the thing for gospel, fortunately.

The hosts of Modernism are monopolising the band-wagon—or are they? Most of them style it Modernism, anyway; a fine word, albeit one not to be taken too seriously. And instead of the water-lily, they're trying to argue, wheedle, or otherwise instill in us the belief that a literal rendering of, say, a grindstone, is to be preferred artistically. Well, maybe. But, with Scotty, "I hae me doots; I hae."

Realism? I embrace it with you. Happily. Some of the finest literature I know is realistic—the sheerest of the sheer. And when it comes to that, realism can bend to the lowest depths or mount to the highest heights. Only they who are afraid to face life are antagonistic toward realism. Turn now from the grindstone to the mowing-machine. I saw one of the latter once as an important accessory to a delightful landscape. Bertram Cox made the picture—he of the English sunlit hills and the broad, misty dales, and the stately trees, and the inviting intimate nooks where, if may be, Heaven's creatures could pause and reflect in peace a while. Cox *might* have given us a literal transcription of that mowing-machine—but he didn't, you see.

No; I for one cannot accept your grindstone—not stark and literal—as a fitting subject for art, my kind of art. Scarcely can I see in it, while admitting its utility, matter for serious thought, let alone for reflection and inspiration; for that's what art that means anything does to you—makes you think and reflect—feel.

But, then, does pictorial mean "pictorial" or "literal"? The barber-shop philosopher—grant his right to say and think as he will—might tell you that they are one and the same, literal, and pictorial. Again, fortunately, that wouldn't make it so—not for all of us.

They ask us, too, to accept a liberal representation of a prize-fighter as art. But I just cannot do it. More specifically, I cannot conceive a representation of such a figure, whether victor or vanquished be the subject,

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which of itself would be art. True, it might be good advertising, or good publicity; it might even please the blood-thirsty; but to me it wouldn't be art, not unless art is synonymous with murder, and hate, and lust, and greed, and intolerance—all states of mind which our modern civilisation is supposed to be eliminating gradually as undesirable. Understand, I am not denying these. They exist, as perhaps some of us know too well; but I have come to think that a civilisation that means anything is synonymous with *refinement;* and that the elements mentioned just aren't to be bothered with much —not where they can be reasonably avoided.

Most of us have come rather to love light and shade, you know. Yet it appears to me that these lovely complements can be abused, even in the name of art, much as my neighbor's jazz--mad daughter can do murder on a beautiful grand piano—an instrument with which a Rachmaninoff, or a Grainger, or a Paderewski, with his soul in his fingertips, can create pictures and stir dreams and ecstasies unspeakable. Possibly it's all a matter of outlook.

There are some who, probably with the best intent in the world, will speak of the pictorial and its requisites, then present you with literalities that are as stark and "recordy" as one well could imagine. When I know, for example, that a pepper is red or green, as the case may be; when I study a representation of one by a competent painter, and then have the photographer come along with one done in monochrome, with emphasis on the darks, and have him ask me to accept *that* as finality in photographic beauty . . . well, I simply cannot accept it, that's all.

They tell us, also, that there is too much discussion about art; that, as they say, art to-day's all talk and no work. This seems to me to be the prize anachronism. Only the self-satisfied, the super-egoists, shun talk about art, and so about *life*. Stevenson, you may recall, who lived much despite his comparatively short span, declared that good literature is but the shadow of good talk. Look earnestly at Hazlitt, to mention another, and you will find there something, if not in the same words, in the same tenor. And the purport implies throughout. How shall we seek truth and beauty, if we commune not one with another? If those camera workers who have glimpsed Parnassus would but admit it, they could doubtlessly tell you that *speech* about art and life—real earnest talk, that is—*must* creep out through their representations, to the spectator with the heart and the mind for the hearing.

How long since, as doers even, have artists had a corner upon the great stock exchange of life, where appreciation and understanding are the current coin? Your real artists do not maintain thus. They well could not, and still consistently devote their lives and a day to the expressing of their innermost beings. Who shall say that the glory is the greater where a work is accomplished for its own sake, for the doing of it alone? Fundamentally, there isn't much, if any, of such work done; for the artist knows, though he may be tacit about it, that once his task is accomplished, there shall be another, sometime, somewhere, to come and behold, and upon beholding, to rejoice. Grant that the doer appreciates more fully his intent than the student or spectator—all real spectators are students, in life, anyway; yet for all that, I am quite certain that I had rather see and feel as deeply as, for example, a Ruskin did, notwithstanding his occasional prejudices and foibles, than to have all the glory any grindstone portrayer ever will amass unto himself. That's my idea, you see.

The Moderns are in the saddle? Well, something like that, perhaps. For the nonce, listen to this: "The old-time quality of 'sentimentality' is very much on the decline in our photographic art. . . . The once-popular 'story-telling' pictures, the tender landscapes with sheep, the bowls of flowers, the portraits of little children, have had to make way for prints in which a new and almost disordered spirit is evident."

How much of exactness is there in that quotation? Let us see. The book from which it is lifted lies open before me here now. We thumb the pages—for perhaps the hundredth time—and what do we find? That out of more than fifty pictures, possibly a half-dozen are in the category set forth in the above quotation as tending to predominate in pictorial photography. The remaining reproductions are of subjects that are delightful irrespective of day or date; the very type, in fact, which the Moderns tell us we must eschew! Pictorial photography! If Modernism means a literal, stark depicting of subjects whose virtues are their meanness —could such be—or "pure design", or "pure pattern", or any other of the purities, then it is evident, I conclude, that pictorial photography is *not* all going to the dogs, nor to

cubism, nor to impressionism, nor to futurism —whatever these "isms" may denote—and so relinquishing its hold upon the more inspiring if simpler beauties and realities.

"Sentimentality!" Away with it! But sentiment—no, never! And again, never! The first implies, as I take it, nawkishness, maudlinism; the second, largeness of mind and spirit, a warm humanism; the first feigned and affected; the second, sincere, earnest, the most so of all human attributes, perhaps. Very little of maudlinism, of cheap "sentimentalism", which reminds one of an overtrimmed hat, have I seen on the salon walls of the past decade, all counsel and agitation to the contrary. To go a step further, one has but to give ear to some of the present-day jazz-wailers to be markedly appraised of this difference in meaning of the two words.

No; if you wish to fill your legitimate exhibition walls with literal renderings of grindstones, or red and green peppers done in black, largely, or eccentric portraits with eyelashes that appear like inverted icicles, though they all be done to a nicety—geometric use of the word, note—if you do this, I say, ignoring feeling and emotional content, your salon gate-keeper will have wilted, passed, and become petrified ere you will have got more than a baker's dozen to come and view your show, gratis or fee simple.

Again, we are informed that photography is to make realistic painting superfluous. That also may be questioned. Photography may make painting of the *literal* superfluous, but not necessarily the realistic. And anyway, what painter that is worthy of his palette—that is painting for appreciation, for meaning —would care to paint the literal as such? Aren't the photographic textbooks filled with truisms about the lens rendering everything that is there, contrasted with the painter, who may add or delete or alter to suit his conceptual desires? or, in other words, inject something of *himself* into his work?

To declare that painting has done "all the things over and over again", the tender landscapes with sheep, the enchanting child studies, the bowls of flowers, as the Modernists, so-called, insist, appears to me like a self-acknowledgment of a limited sense of appreciation—nothing more. Painters *have* done landscapes, and fishing-smacks in harbor, and ruins of old castles on majestic prominences, and fords, and architecture; but when some etcher, summoning feeling as well as science to his aid, comes along and represents to me these same materials with all his lyric delicacy of line and tone—then I thank heaven that etching was discovered and perfected; and this without lessening one jot my appreciation and admiration and respect for painters and paintings. All of which is to say, that a painting, an etching, a charcoal-drawing, or a pictorial photograph—*each* will have its charms and delights for the spectator who wills to see and feel; and this irrespective of possible duplication in subject matter.

While I admit that too many camera workers are content to stumble along the low road of self-complacency, and while I appreciate the expanse in intellectual horizon as indicated by new pictorial viewpoints which, if they convey anything, inform us positively that "de world do move", I am also earnestly certain that what we really need is more of outlook and breadth in our lives and work, and less of jealousies, phrase-bandying and intolerancies; if, that is, we are to continue ourselves and inspire in others that search for the nobler realities and dreams.

Then there's too much criticism, chaffy and biting by turns, of the way cameraists, aspiring to do something even moderately better than mere button-pushing, turn to painting, or more specifically, to paintings, for study and enlightenment. How would you have men acquire knowledge, considering the comparative newness of photography as a medium of representation? If not to painted pictures, where, then, shall the cameraist go? Paintings that are pictures have composition, and balance, and tone, and harmony, and chiaroscuro, and a whole lot of whatever else the photographer must embrace, if he is to become pictorial. The debt which the pictorial photographer owes to the palette can never with justice be computed. Not, of course, that your camera worker should aim to duplicate slavishly the painter's work—not as to outlook and certainly not as to color. For photography can render in ways which no painter can hope to imitate successfully, let alone duplicate. We study paintings by Inness, Constable, and Corot, and we realise that no lens ever will successfully reproduce them. So the cameraist, if he be alert, as is to be hoped, will find his subjects where he may, and re-present them in the delightful ways and means peculiar to his own chosen medium. Painters, you know, have done the

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sea, yet I haven't learned to love the less those powerful seascapes by F. J. Mortimer and other successful photographic pictorialists for whom the sea ever holds mystery and enchantment. Personally, I should put it down as incontrovertible that the photographer essaying to render pictorially should raise his appreciation of the beautiful through the study of any means or medium which has an iota of æsthetic content and value. Certainly the appreciation of many things, rather than of a few, is to be desired; else why the advancement of education?

Tongue in your cheek? No; never a bit of that, either; since no amount of "high-hatting", or feigning, or vilifying can ever usurp an earnest sincerity, either in men, or in art, which is their testimony patent of the beautiful in life.

So, then, for your lode-star, whereby you shall reach up, up; for that, I say, not your literal, hatch-grained block of timber, nor yet your freak likenesses of otherwise delightfully humans—none of these, no; but instead, for this ascending everlastingly, that warmth of heart which alone is humanity; that grace and dignity which rejoices ever in the good and the splendid; and, finally, the crimson-capped cloud-towers of evening. To these, and principally to these, shall your reaching aspire, if you would seek that truth which is beauty, and wisdom, and life.

The Making of Pictures by Photography

Number Four—Introducing Individuality into a Picture

CLARENCE PONTING

THE prospective picture-maker who has so far followed these articles will now be able to produce the best print of which the negative is capable, in which the sky-portion will be nicely filled with suitable cloud-forms. His work will show a wonderfull improvement, through the knowledge of the correct printing paper to use with a variety of negatives, and by means of adding clouds. So great will be the difference that many photographers may be content to make future pictures by such straight means. The result will be that nice, clean stuff which always commands so much admiration when seen at exhibitions.

That mysterious something which turns the commonplace into a picture, and which, when reduced to realities, simply means careful selection of the subject, a study of balance and tone-values, and the pleasing grouping of masses in the composition, can be obtained by a study of pictures in art-journals, or the works of artists exhibited at local galleries. I have always felt that better work would result if the photographer were content to follow his own inclinations. If it is felt that an impression has to be recorded in pictorial form, it follows that this can best be done by the author in his own way. Given the necessary technical skill, a more original work will be produced by a worker who is not bound by the conventions, or who is placing the desire to be exhibited before the production of original work.

It seems almost a pity to show a worker who is able to turn out pictures by pure photography how alterations may be effected in the rendering of the tones. This is because, if one is not careful, as soon as the print is tampered with, false values are almost certain to be introduced. On the other hand, the method undoubtedly enables a worker to get into his print the impression he desires to convey and he is thus able to express his individuality. The purely technical worker would be advised to be content with reading the instructions, and not to put them into practice. Once a photographer has realised the power which this method of control places in his hands, he will never be content with a straight print.

Those who, like myself, hold the opinion that the end justifies the means, and that the results so produced cannot possibly happen in nature, may be interested in the method of working-up exhibition-pictures by means of artist's oil-colors, which is adopted by all the leading workers in this country. As a rule, very little work is required to produce the desired effect, and no trace of the hand-work is visible in the finished result when the work is carefully done. The evil of doing too much work on the print is apt to occur

FIGURE 1 CLARENCE PONTING

Print from complete untouched negative

when the fascination of the process gets such a hold on the worker that he does not realise he is gilding the lily.

Working up a print by means of artist's oil-colors may appear to have something in common with those horrible atrocities sometimes seen where a photograph has been painted over with oil-colors and transformed into a crude oil-painting. This method of control has nothing to do with such things. It should more correctly be termed reinforcement of the print by means of oil-color applied to certain parts. Only one color pigment is used, this being one which matches the tone of the photograph and which chances to be that used by artists who paint in oils.

No matter how technically excellent a print may be, the idealist will feel that it does not quite convey the impression he desires to create. An improvement might be effected by darkening or strengthening of the shadows; the degrading or deletion of irritating highlights, or the strengthening of a highlight by introducing a darker tone in its proximity. A blank foreground requires interest, which may take the form of a shadow which did not exist in the original composition. All this, and more, may be done by the oil-reinforcement method.

The materials required are few and inexpensive: a tube of artist's megilp, a tube each of artist's blue-black and lamp-black oil-color, and a small bottle of linseed oil. Here I might add that, although linseed oil gives a delightful surface for working on the print, it should only be used on papers having a cream-base. If used on a white base, the results are all that can be desired for a short time. Exposure to light and air causes the oil to discolor and become a pale yellow. This would not so much matter if this yellowing were uniform all over the print; but linseed oil produces this yellowing in patches, which are extremely objectionable on a white-base print. With a cream-base the yellowing is so slight as to be unnoticeable. I mention the oil because it makes the work so easy, and for this reason I always use it with cream-base papers. Many alternative mediums have been suggested by the English workers, of which terebene and spirits of turpentine seem the favorites. These, when mixed, and used with the megilp, make the work fairly easy of application, and no discoloration takes place when used with white-base papers. In my own work I have found that another artist's medium, when used alone, gives almost equal results to linseed oil and megilp, and never discolors. This liquid is

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known as "purified Poppy Oil", bleached over water without chemicals, and it is made by Winsor & Newton, Ltd., Rathborne Place, London, England. Exactly what it is I do not know, but quite a small bottle will suffice for a large number of prints, and it costs only one shilling in English money. A large wad of cotton, a palette—a piece of glass, such as an old negative, will suffice—and a piece of very soft rubber will also be required. A soft, well-washed cotton duster will also be found useful. For fine detail-work, a No. 1 hog-hair artist's paint-brush will be required. The bristles of this should be cut off square with the mount, so that only 1/8-inch remains. This will give a very stiff brush, which may be used for applying a quantity of pigment, or the merest trifle when applied by the corners of the brush.

It will readily be understood that before an oil-color can be applied to a photographic base, the surface of the print has to be prepared in some way. This is done by rubbing one of the previously-mentioned mediums over its surface with a swab of cotton slightly moistened either with poppy oil, linseed oil and megilp, or turpentine, terebene, and megilp. If megilp is used—and this makes for easy working even with poppy oil—a blob about the size of a pea is squeezed on to the print itself, and evenly distributed by means of the swab, moistened with one of the above oils. Terebene and turpentine are quick driers, and not advised where the print will take some time to work up. Poppy oil and linseed oil are slow driers, some days elapsing before the print is in a condition where it can safely be handled for mounting.

When the surface of the print has been evenly "oiled" by the first swab of cotton, another dry swab is taken and rubbed over the print, exactly as though it was desired to remove all traces of the applied oil. If this is correctly done, there should be no oily sheen on the surface. Sufficient will remain in the pores of the paper to allow of the application of as much oil-pigment as is desired. The print is then in a condition for working up. An article describing this method of preparing the print may already have appeared in the pages of PHOTO-ERA, as the Editor has had this in hand. The method, however, is essential to this series, and I must apologise to regular readers for the repetition.

The brush is used to apply the pigment where required, and is not employed for painting. Painting, in the true sense of the word, is not used in this method of control. It is also used as a "rubber" when the applied paint is used to subdue a highlight, or to delete an undesired object. It must be understood that this is the sole use of the brush; it cannot be used for the lightening of any tone or any part of the picture. The pigment is picked up by the brush from a small blob of the color, which has been spread on a piece of glass. If a heavy tone is required—such as when a shadow has to be introduced, or darkened—the whole of the bristles are charged with the paint. If a highlight has to be lowered in tone, or degraded, the corner of the bristles is merely touched on the color, which is applied to the print in a series of minute circles made by rubbing the corner of the brush in a circular motion. When lining, or working close up to a figure, the brush is used like a pencil at an angle of 45 degrees, and drawn across the surface of the paper in the required direction, very little color being used.

The work, as applied with the brush, will be hard and crude, these hard lines being smoothed, or vignetted, into the surroundings by means of the soft duster stretched over a finger. In the case of fine detail, the cloth is stretched over a blunt-pointed piece of wood. Practice will make perfect, and, if the paint is incorrectly applied, it can easily be removed with a swab of cotton damped with one of the mediums, and another attempt be made. Extremely fine detail may be inserted on the oiled surface by means of a BB black lead pencil, such work also being smoothed with the cloth. Where large breadths of a print have to be degraded, the brush is fully charged with paint and rubbed over the print at these positions in a series of large circles. Again, please notice that the effect will be very crude, the necessary spreading of the paint in an even tint being done by means of a cloth stretched over the finger.

It would be perfectly easy to demonstrate this if I could show individual readers this method of applying the pigment and smoothing it out. As this is impossible, I have prepared a series of prints which may speak plainer than words. In the first illustration, I show a print from the entire negative, with the object of illustrating the value of trimming—which can be seen in the last print—and the alterations, which can be effected by very little work on the print.

An examination of this print will show that its chief fault is lack of concentration, this being due to the tones of the sky seen

FIGURE 2 CLARENCE PONTING

Appearance of print when oil-pigment is first applied

FIGURE 3 CLARENCE PONTING

Effect of "smudging" the oil-paint seen in Figure 2 by means of a cloth

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THE FIRST TOUCH OF WINTER
CLARENCE PONTING
FIGURE 4
Completed print as it appears when treated with oil-paint.

through the tree-boughs being almost the same as those in the snow. As a rule, when the sun is shining on snow, a blue sky is present which is several tones darker than the snow itself. It was so in this instance, but was not recorded by the plate. In order to concentrate the interest on the snow-covered trees at the left, and the cart in the middle distance, it was necessary to darken the sky. A further improvement could also be effected by strengthening the shadows which fell on the snow in the foreground.

In the second illustration, some idea of the appearance of the print, as it looks after the paint has been applied by the brush, may be gauged, and the hard, crude lines of color noticed. At first sight such a patchwork of paint might cause the beginner to think he had made a mistake somewhere. It is, certainly, rather alarming to see a choice print appearing in this guise. As a matter of fact, this color is not actually in contact with the print, but rests on the minute film of oil which covers the image. This being so, the paint can easily be smudged if touched, and on this the whole basis of oil-control depends. If it were not for the oil-coating, the color would be absorbed into the pores of the paper. Being movable, it can be spread evenly, and to any desired tone by means of a smudging action of the finger covered with a cloth.

In the third illustration the effect of this smudging of the paint can be seen. It is only roughly done to allow of the effect being reproduced in a halftone block. The tone here is too dark. Harder rubbing would lighten the tone until it was the merest shade of gray. Even in so rough a copy, the effect of darkening certain light portions of the print can be seen. The last and finished print demonstrates the control which has been obtained by completing this smoothing of the paint, pressure of the cloth during the rubbing being varied according to the quantity of pigment it was desired to leave on different parts of the print. Highlights are introduced by removing the paint by means of a small piece of cotton, which is screwed up into the shape of a stump—or a blotting-paper stump may be used—and damped in turpentine. This is rubbed over the parts where it is desired to clear the highlights. If it is not desired to remove the pigment entirely from a definite spot, it can be lightened by rubbing with a dry stump, or the twisted-up piece of cotton, this being done before the paint has become dry. Small touches of highlights can be introduced when the print has become thoroughly dry, by rubbing with the pointed corner of a piece of soft india-rubber.

Such a method of treating mat enlargements has the advantage of not altering the outline of the subject of the picture in any way. The pigment is used entirely to correct the tone-values which may not have been recorded in the negative, by lowering the tones of some of the highlights, and by emphasising the shadow-details in other parts. Individuality is thus introduced into the print, and concentration obtained which could not be done in any other way with, perhaps, the exception of bromoil. The oil-control method has the advantage over bromoil, in that there is no grain in the image, the surface being exactly similar to that of an untreated print.

[With all due respect to the many pictorial photographers in the United States who have achieved international recognition, we believe that, as a whole, amateur photographers in the United States are not accustomed to giving as much time and study to their photographic work as our friends overseas. Perhaps we are too much in a hurry or is it that our nervous tension is too great for painstaking, methodical technique? In any event, Mr. Ponting points the way to those who care to follow him into quiet, but none the less, interesting pictorial byways.—EDITOR.]

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FIGURE 1 FRANK H. TREGO

With standard film, no filter. Distance detail lost in the haze. Foreground is underexposed. Sky is blank.

Panchromatic Films Good for Amateurs

FRANK H. TREGO

NOW that the use of panchromatic cut films, filmpacks, and plates is becoming more widespread, and especially so in the professional photographic field, it will be well for the amateur to get into this subject for the purpose of obtaining results which are practically impossible with the ordinary material. The purpose, therefore, of this article is to aid the amateur in successful use of the advanced emulsion.

Practically all exposure-meters set forth the allowances to be made in the exposure for light foreground, distant landscape, clouds, etc. The reason for this lies in the effect which the ultra-violet and violet light have upon the standard film or plate. Due to the reflection of this light from the dust and moisture particles in the air, the greater the distance and panoramic scope of the picture, the greater the quantity of this light; therefore the exposure must be cut to at least one-quarter of that required for normal subjects with strong foreground.

When using panchromatic cut films, filmpacks, or plates, it is a great advantage to use also a color filter on the lens to bring out the relative luminosity of the various colors in the subject. Green, black, yellow, orange, and red all take black in the print; and, of course, this does not give a true rendering of the subject at all. For instance, a photograph of a person with blond hair renders the hair as black, and a photograph of yellow daisies with black center shows the whole flower as black. Blue, on the other hand, photographs as practically white. Blue sky is white, and we consequently have a picture which is not at all like what the eye beheld.

Now, with panchromatic material and a color-filter on the lens, we can show blue as dark, yellow as light, and so on, and therefore more nearly as the eye sees them, if imagined in monochrome.

The color-filters absorb the ultra-violet and violet and blue light in proportion to the density and color of the filter, and do not allow it to reach the film; so that the enormous quantity of these lights, or colors which are reflected from the sky and distant atmosphere, are prevented from overexposing the negative on that portion which they cover.

Illustration No. 1 shows a distant landscape photographed without filter upon ordinary material. No. 2 shows a distant landscape made with panchromatic film and No.

FIGURE 2 FRANK H. TREGO

Distant landscape. Foreground and distance correctly exposed and clouds brought out. (Filter No. 2.)

FIGURE 3 FRANK H. TREGO

A wonderful oak tree, with yellow daisies covering a green field in the foreground. The white sky is due to mist. (No. 3 filter.)

XUM

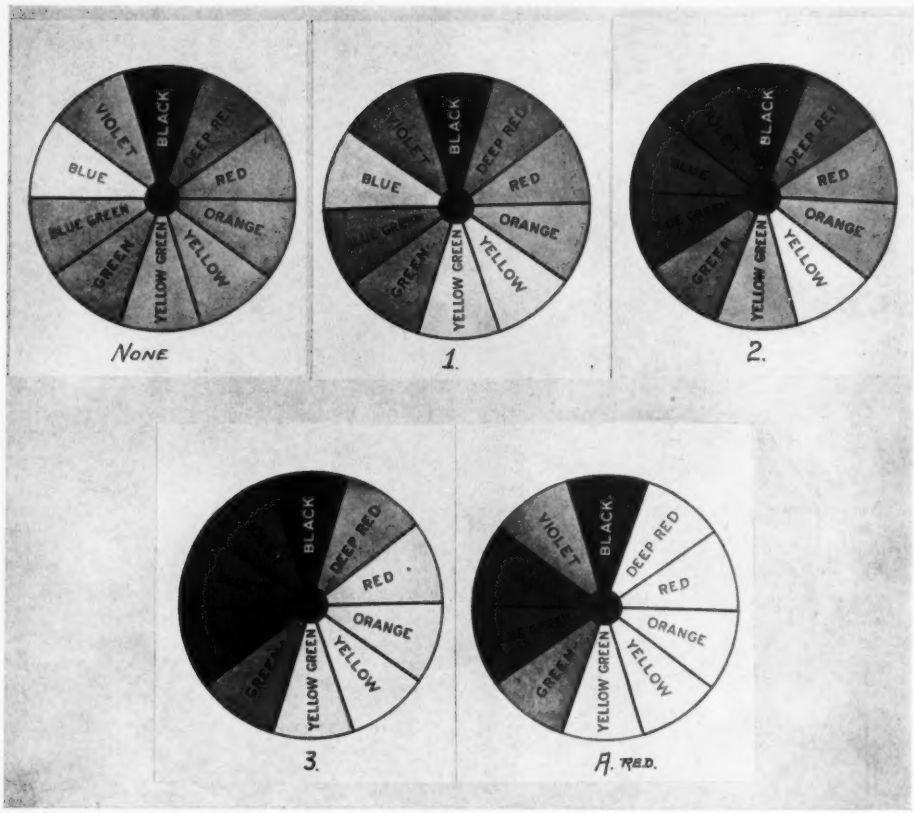


FIGURE 4 FRANK H. TREGO

Panchromatic material, even without the benefit of a color-filter, gives better relative luminosity of colors than the standard film. It will be seen that yellow is not dark when no filter is used, and that green is some darker than yellow.

2 Wratten K yellow filter. It is at once apparent that in No. 1 the distance is lost in over-exposure and haze. In No. 2 the haze has almost disappeared and clouds have been brought out, because the sky was darkened by the filter and the blue does not show as white.

The allowance, therefore, in the exposure for the various conditions does not apply when using panchromatic material and a color-filter of correct density, and neither does it apply in the use of standard film with a filter; but the standard film cannot be compared with the panchromatic in the results obtained. In the following table, I have given the allowances to be made for both standard and panchromatic film with the various strength filters. With panchromatic film and the No. 3 K-filter, there is no allowance to be made for exposure over that for normal subjects, except for the filter used. Factor for the filter is given in the package. No. 3 is generally given as three times, and No. 2 as two times normal exposure.

NORMAL SUBJECTS

Filter	*Exposure Meter*	*Ordinary Film*	*Panchromatic Film*
None	1/50 sec. x 0	1/50 sec.	1/50 sec.
No. 1	1/33 sec. x 1½	1/33 sec.	1/33 sec.
No. 2	1/25 sec. x 2	1/25 sec.	1/25 sec.
No. 3	1/17 sec. x 3	1/17 sec.	1/17 sec.
No. A (red)	1/6 sec. x 8	1/6 sec.	1/6 sec.

Distant Landscape				
None	1/200 sec.	x 0	1/200 sec.	1/200 sec.
No. 1	1/160 sec.	x 1½	1/160 sec.	1/100 sec.
No. 2	1/100 sec.	x 2	1/100 sec.	1/60 sec.
No. 3	1/66 sec.	x 3	1/66 sec.	1/17 sec. (No allowance)
No. A (red)	1/25 sec.	x 8	1/25 sec.	1/6 sec. (No allowance)

It will be seen that, when using No. 2 filter with panchromatic film, the allowance is but slightly less than for normal subjects, and when using No. 3, there is no allowance away from normal exposure for normal subjects. Correction is for the filter only.

In other words, when using panchromatic material, make all pictures, except close-ups, under trees, etc., with the same exposure as indicated for normal subjects, correcting for the filter used only. This rule will correctly apply even for clouds and sea-pictures.

With ordinary film, when allowance is made for distant landscape—meter will indicate one-quarter normal—the foreground is generally badly underexposed; but by following the above method and using panchromatic material and a color-screen of proper density, this fault does not appear and the foreground will show up the detail as nicely as is shown in the distance. The whole picture thus receives the correct exposure, and the clouds will appear as if by magic.

The general tendency with panchromatic and color-filter is to underexpose, and this produces a harsh picture, sometimes spoken of as overcorrected.

The No. 2 filter will get the clouds in any landscape, and the No. 3 will show up the absolutely true relative luminosity of the colors in monochrome, and, in addition, will so darken the sky that the faintest clouds will be brought out. Nos. 2 and 3 also practically eliminate the average haze in the distance, and the red A filter will absolutely cut out this haze and bring the distance as distinct as the foreground.

As a guide to the effect of the various colors when using the several filters, illustration No. 4 will be a help, and by a study of it the photographer may choose the effect he wishes to produce in his picture and obtain it every time.

The panchromatic material, in the form of cut-films, costs no more than the standard cut-films. It may also be purchased in roll-films or filmpacks at additional cost. This material is sensitive to all colors and, therefore, cannot be handled in a red or yellow light. Their manipulation must be carried out in darkness or in a safe-light (green), obtainable at photographic supply stores.

When using a developing tank for films or plates and the Eastman pyro-powders for same, give the development 35 minutes at 65° Fahrenheit instead of 15 or 20 minutes, as specified on the package. This applies to both panchromatic and standard film.

[Most of us are very apt to question anything that is new or that which requires a change in our usual routine of living and doing things. We may become convinced that the new thing is good and does what is claimed for it; but most of us need a mental push to arouse us to action. Mr. Trego has given those who have not tried panchromatic material a mental push for their own and photography's progress.—Editor.]

Beyond Ourselves

WHAT is the use of having ideals? They are bound sooner or later to be dashed and broken, or, if not worse, to be shown as so false that nothing remains for belief, and skepticism grips us. We build our little plans. Life shatters them. We count future joys. Death steps in and closes the book. We love. The loved one fails us. The blue sky grows dark. The rain falls. What on earth is the use?

Perhaps there may be a soul brave enough, strong enough, wise enough, to beat Life, Death, Skepticism. He may refuse to take the knocks of the world as final. He rises and struggles on and finds the way less difficult than it had at first appeared.

In that one brief moment when he enjoys the striving onward, feeling convinced that he can overcome his obstacles, he is the happiest man in the world. He sees his ideal, with the possibility of its fulfillment still before him. The first doubts and rough spots he has passed through. Beyond lies his goal. Never to be obtained, he knows; never to be lost, he vows. Little by little he approaches it more closely. To him is the greatest happiness life offers—the joy of striving beyond himself.

Contact.

XUM

The Value of the Miniature Camera

KARL A. BARLEBEN, JR., A.R.P.S.

EVERYTHING seems to be made smaller these days. We have smaller automobiles, radios, and apartments. Cameras, too, are being made smaller than formerly. Not so very many years ago, the amateur photographer thought nothing of carrying a large 8 x 10 outfit along with him on his photographic rambles. There was nothing else for him to do. The modern camera enthusiast would consider carrying such a camera around hard work. As a matter of fact, such a practice would be unnecessary these days; for so many cameras are made that are small, compact, and entirely satisfactory. There still lingers, however, an idea that miniature cameras are little else but toys. This idea is mainly prevalent among the "old-timers", who have for years used only large-sized plates. They naturally have accustomed themselves to working with large cameras, hence can see no sense in the smaller "contraptions". It is interesting to compare cameras, with regard to size, in an effort to discover if there is any substantial reason for accepting or rejecting the smaller camera for serious work.

The 8 x 10 view camera, such as is used by commercial photographers, is familiar, I am certain, to all camera enthusiasts. We shall take it as a guide on the large size, as it is commonly used professionally. The camera is naturally large, and when we have a dozen plate- or film-holders to take along with it, a carrying case, not unlike a young trunk, is necessary to keep the outfit together. Its price, which usually includes several lenses for various purposes, holders, filters, case, and so on, mounts up to quite a pretty penny. We have, then, a considerable outlay of money, to begin with. Next, our sensitive material costs into the dollars, rather than cents, per dozen. We cannot afford to be wasteful. Then, when we want to make an exposure, we have the problem of transportation. Almost everyone has a car these days; but even so, few amateurs, indeed, care to pack such a large outfit with them. When we come to making an exposure, we have several duties that are a necessity. First of all, the camera is unpacked, the tripod opened, the camera mounted upon the tripod, the bellows extended. Focusing comes next; accordingly, the focusing-cloth is shaken out and spread over the rear of the camera, while the owner's head disappears beneath it. The subject is now sharply defined on the ground-glass, and the lens closed. A holder is selected and placed in the camera. The holder-slide is removed, and, finally, the shutter is released. With a sigh of satisfaction, the photographer inserts the slide in the holder, and proceeds with the next exposure—going through all these manipulations each time. This is all very well for the professional, whose work require negatives as large as 8 x 10; but for the amateur, the cost, upkeep, time, and size are a detriment.

Coming down the scale a bit, we find the 5 x 7 and 4 x 5 sizes. Here we have a problem similar to the above, but not so terrifying. Cameras of these sizes may be more compact and their price not so high. The 4 x 5 size is used a great deal for press work, and we find the reflecting type of camera and the folding type prominent here, although view-cameras are made in these sizes, too. The amateur, let us say, wants a fairly large negative, yet portability. He can have it; but still, size and weight is a consideration, to say nothing of the price of materials. A number of photographers limit their negative size to 4 x 5—nothing smaller, feeling that the smaller sizes are not practical for really serious work.

There is a class of amateurs who make the $3\frac{1}{4}$ x $4\frac{1}{4}$ plate and film popular; in fact, this might be termed an ideal size of plate—not too large, nor yet too small, of pleasing proportions, and the proper size to make lantern-slides by contact. Running smaller, we find the $2\frac{1}{4}$ x $3\frac{1}{4}$ and the $1\frac{5}{8}$ x $2\frac{1}{2}$. And last, but not least, there are cameras which use motion-picture film, either single or double frame. From $3\frac{1}{4}$ x $4\frac{1}{4}$ down to kiné film, cameras using these various sizes are extremely popular. The "old-timer" will explain that the people who use these cameras are only beginners and cannot hope to do serious work with them, or words to such effect. Now let us reason this thing out. Everyone will at once agree that these small cameras are easily portable—very much so, most of them fitting into the pocket with little or no trouble. Plates and films for them cost considerably less than the larger sizes, meaning that the owner can expose more negatives at less outlay for sensitive material. These two

factors make a powerful appeal. As far as serious work is concerned, it must be noted that these small cameras—not including the cheaper types—are equipped with the finest lenses, working at rapid speeds. Their construction is of the best, as is the design and finish. All necessary features are incorporated, such as double-extension bellows, rising-and-falling front, side-swing, and in some cases focal-plane shutters are used in place of the usual between-the-lens shutters. The Leica, for example, perhaps one of the smallest practical cameras made, employs an efficient focal-plane shutter. These refinements are not found on toys, by any means. The changing of lenses is important in a great many cases, and we find that several small cameras are equipped in such a manner that telephoto lenses may be used in place of the regular lens.

Is the small-sized negative inferior to the larger size? Off-hand, it might appear so; yet it must not be forgotten that the small camera requires a lens of much shorter focal length than a larger camera, and the shorter the focal length the greater depth we have. In this instance, at least, the small negative has something of an advantage. The lens can be left open—for adverse lighting-conditions—and still yield a negative with more depth than the larger lens stopped down. We are assured, therefore, of a reasonable depth of field with a small camera, even with the lens wide open.

These small images do not make imposing contact prints, it is true. Their size, being limited, is not as impressive, perhaps; hence enlarging must be resorted to. This might appear, on first thought, to be an advantage of the larger camera—but wait! The majority of negatives of everything up to 4 x 5, yes, even 5 x 7, must be enlarged in order to present a pleasing appearance, so that there is no particular drawback to this; in fact, there is another advantage the smaller negative has. Being made with a short-focal-length lens, such negatives make beautiful enlargements, sharp and crisp, even to extreme sizes, such as 8 x 10 and 11 x 14. Out of a dozen plates or films, one usually finds only a few really worth keeping; hence these few can be enlarged, the rest discarded. One can afford to discard a number of small negatives, whereas it might be painful to throw away larger-sized negatives, because it would represent a greater investment—all for nothing. It has been said that when larger cameras are used, greater care must be exercised in making each exposure, for there is that cost to be considered, and no plates should be wasted. This is true enough; but if the amateur is going to make errors, he will make them just as well with a large camera as with a small one, regardless of how much he remembers the cost of a dozen plates; hence this leads us nowhere. It is easy to waste film in a tiny camera, where sensitive material costs very little; but the serious amateur has regard enough to try to make a picture each time he trips the shutter. The cameras using kiné film, indeed, invite the owner to snap everything in sight; but the cost per exposure is so very little that one does not consider it waste to snap here and there without forethought.

The small camera appears to have all the advantages of the larger ones, plus many decided added good points, as far as the amateur is interested. Pictures made with tiny cameras in the hands of serious workers prove the fact that they are not toys. In fact, there is really no necessity for using a large camera any longer—all the good features can be found right in the small outfit. The trend is toward smaller cameras, and very few amateurs today fail to realise this fact. The large cameras are all very well for professional work, such as commercial activities where large negatives are necessary; but outside of this, there is no need to burden oneself with such an outfit. In fact, the trend is slowly coming to smaller cameras in professional work, too. What with the very efficient enlargers in use, small negatives yield results that equal the regulation larger sizes. Perhaps people are getting more lazy, I do not know: but as far as that is concerned, I would sooner place a camera in my pocket than carry around a small trunk, especially where the ultimate results would be equally excellent, which would be the case with just a little judgment in the selection of the camera.

After all, it is the final result which counts. A true picture is a picture even though it is made with a vest-pocket or smaller miniature photographic equipment.

It's good to have money and the things that money can buy, but it's good, too, to check up once in a while and make sure that you haven't lost the things that money can't buy.

George Horace Lorimer.

XUM

The Photographic Range of the Riviera

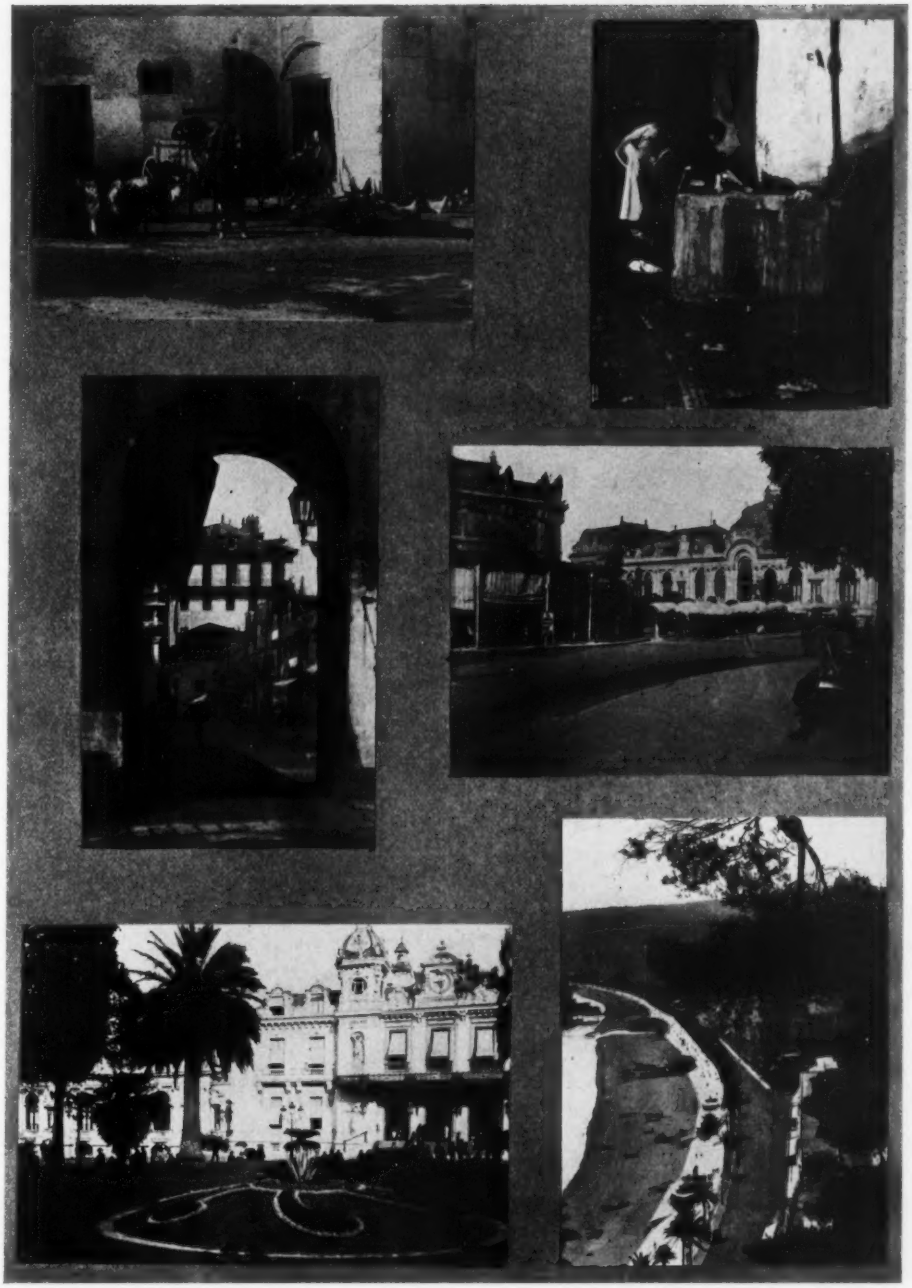
MARGARET PARSONS

TO the butterflies of society, the Riviera is a playground *de luxe*. The yachtsman finds it a heaven; but to the photographer who has struggled through fair weather and foul, through one adverse circumstance after another, it is more than Paradise. First of all, the light is beautiful and pure, bright and soft. There is no lack of atmosphere, and, above all, the range of subjects is enormous: landscape and seascape, architecture and genre, queer old streets and queerer harbors, native boats with sails picturesquely grouped, and cobbled pathways leading from the sea. Vistas of sea and shore framed in overhanging pine branches are numerous. Ascend the hills inland, and the extensive cultivation of vines, fruit, and flowers presents another type of photograph. Old French farmhouses *en route* will tempt the camera again from its case. Then climb the mountains, and the scene changes. Gone are the warm summer hours, and we come to the sterner climes of frost. Take out filters, and prepare for a land of snow! We gradually ascend and reach the snow-capped heights, with pine trees casting their shadows over the white surface. We come to a mountain village, and, racing over the slopes beyond, we see enthusiasts on skis. High-speed work now comes to lend variety to our films.

We return to the coast, and on a brilliant morning decide to do color work. If there is one spot on earth where autochromes should be used, it is on the Riviera. One has the advantage of perfectly fresh Lumière autochrome plates, and the brilliant light minimises the exposure. I found one-half second at F/6.3 at midday ample, and that will fully record the green of the trees and foliage, the wonderful rich shadows of the flowers, and the coloring of the Continental buildings, without losing the far-famed purple-blue of the Mediterranean sea and sky.

That a mutual interest in photography will demolish barriers erected by society more readily than any other method was clearly demonstrated by an encounter I had in France. I wanted to photograph the old harbor of Nice in the evening light, and had climbed the steep path up the hillside to do so. A retaining wall prevented my getting just the point of view I required; so I walked along a very narrow ledge on the other and outer side of it. It must have looked rather more precarious than it was; because just when I was about to release the shutter, a gentle voice on the other side of the wall, behind me, said, "Are you quite sure you are safe there?" I nearly wasn't—as I had been too engrossed to hear footsteps, and I was startled. Then the lady's husband came up and asked if I was doing color work. Immediately we were plunged into a discussion —Lumière autochromes *versus* Agfa color plates, and their respective virtues. He was a keen enthusiast also, and quoted one of the London Camera Club's debates on the subject. They passed on, and I continued my work; but for five minutes a bond of sympathy had swept aside the curtain of convention in order that two passers-by might commune on that subject—photography!

[It so happens that this article is not only a timely suggestion to pictorial photographers to grasp the opportunities offered by the Riviera, but it also brings back to the Editor one of the cherished experiences of his life. His was the priceless possession of a mother who was not only a true mother but a chum as well. Together we spent three months on the Riviera while the Editor was a boy. Our headquarters was at Mentone, a beautiful town not very far from Monte Carlo. Many afternoons we mounted our bicycles and rode over the splendid Corniche highway to Monte Carlo, where we visited the Casino and listened to the brilliant concerts given nearly every afternoon by a symphony orchestra. We would have afternoon tea at one of the many cafés and ride back to Mentone in the gathering dusk of evening. At other times we would climb the hills and find a point of vantage which commanded a magnificent expanse of the Mediterranean with its never-to-be-forgotten blue in sea and sky. Then, again, there were the days of Mardi Gras, with all their color and pageantry. Those were the days before Autochromes or Agfa Color Plates and the beauty of Technicolor and Kodacolor in motion-pictures. Today photography has made it possible to record the scenes and life along the Riviera in all their original beauty and color, and for tourists to bring back pictorial souvenirs of one of the most beautiful and picturesque parts of the world. May such an opportunity fall to our readers!—EDITOR.]



Old French Farmyard Scene
In the Old Quarter, Nice
The Casino, Monte Carlo

Public Baths, Old Italian Village
Café de Paris, Monte Carlo
Promenade des Anglais, Nice

GLIMPSES OF THE RIVIERA

MARGARET PARSONS

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Speed Ratings and Speed Plates

MILTON M. BITTER

MANY amateurs, in their search for high-speed plates or films, do not realise that high speed is not always associated with equally high quality. A high-speed plate may show a first density considerably in advance of a lower-rated plate and yet not "hold in" long enough to attain as good printing-quality as the slower one. It's the print that counts.

The Hurter and Driffield ("H. & D.") rating, so eagerly looked for by amateurs on their boxes of imported plates or films, gives no indication whatever of the real quality of the plate or film, nor is it intended (by H. & D.) to do so. In my efforts to find out if there is any definite relation between a Watkins' and an H. & D. rating, *i.e.*, any way of converting one into the other, I find that there is not.

I was led to make this investigation through noting, last summer, in the *American Annual of Photography, 1920,*—in that year not issued by its present publishers—a Table of Comparative Plate-Speed Numbers, which, however correct it may have been in 1920, did not impress me as being correct at the present time.

I quote the explanatory paragraph that follows the table:

"The above Watkins and Wynne numbers are equivalent to the H. & D. only when the latter is determined in accordance with the direction of Hurter and Driffield; that is, with pyro-soda developer, and using the straight portion only of the density curve. To correct H. & D. into Watkins: Multiply H. & D. by 50 and divide by 34. For all practical purposes, the Watkins P number is 1½ times H. & D. To convert Watkins into Wynne F. Numbers: Extract the square root and multiply by 6.4. The above methods have been approved by the Watkins Meter Company and the Infallible Exposure Meter Company."

So much for the past. Now, as to the present. I quote from a letter, under date of August 15, 1930, from *The British Journal of Photography:*

"There is no definite connection between H. & D. speed numbers and Watkins numbers. The H. & D. method of testing concerns itself with the exposure required to produce the faintest deposit, whereas the Watkins method employs rather the medium densities, as indicating the most satisfactory exposure. Hence two plates which are identical, according to an H. & D. test, may differ under a Watkins test. Further, one maker's H. & D. 500 may be distinctly different from another maker's."

The following is from the Watkins Meter Company, September 6, 1930:

"We use the H. & D. system for testing, and simply multiply our H. & D. number by 2 to get the Watkins number. But this ratio does *not* apply to H. & D. numbers marked on boxes, which vary enormously with each maker. In the case of two makers, their average H. & D. numbers are over three times those of our tests of the plates. In other words, H. &. D. numbers—as between the different makers—cannot be taken as a standard at all, and all tables of ratios between H. & D. and Watkins, Wynne, Warneke are valueless unless limited to one maker. In some cases, H. & D. numbers on boxes must be taken as a mere advertising statement. For the above reasons, we always refuse to quote ratios. We do not undertake speed testing to order. Speed numbers are not a guide to quality. A 350 plate may be much inferior, even for snapshots, to a 180 plate."

It would seem, then, that, in a nutshell, H. & D. testing concerns itself with a *minimum exposure* for obtaining the first visible silver deposit on the plate; whereas Watkins, Wynne, Burroughs Wellcome, and other concerns making exposure indicators give ratings that will give good prints with shadow detail. Right here it may not be amiss to emphasise again to the beginner the value of full exposure and to state that the small amount of money spent for an exposure calculator meter —visual or actual—or a set of time-tried exposure tables will be repaid many times over in wasted plates—and heartbreaks.

Stop guessing! There are several such exposure indicators on the market, ranging from the Justophot at $10.50 to the Agfa Exposure Table at 50 cents. At various times, all of the better-class exposure indicators have been advertised in PHOTO-ERA.

Nowhere in the world, so far as I know, is there offered such real value for seventy-five

cents, either for beginner or advanced worker, as is to be found in the Burroughs Wellcome Exposure Calculator and Handbook. I have bought it annually for many years. It is a small volume of some 230 pages (1931 edition) including diary, on the inside back cover of which is attached a revolving disc against a calculating scale. On the inside pages are listed B. W. ratings for nearly all the American and European plates or films, and a "light-value" for each hour of the day, for each month of the year. Knowing the B. W. rating of his plate or film, as per list, and referring to the "light-value" table for the current month, all the amateur has to do is to turn the disc and presto!—the exposure is indicated for *all stops* instantly. No figuring at all is necessary. This little book, though particularly designed, of course, to sell Burroughs Wellcome products—good ones they are, too, and all in convenient tablets—is a veritable cyclopedia of photographic information and tables. In using this book it should be borne in mind that the *development* speeds given are those to be used with the B. W. developers, not some pet formula of one's own, and the speed ratings should be judged accordingly.

Oh, yes, I nearly forgot one of the most valuable features of the book—the thirty or more appropriately ruled pages for recording the data about your exposures, development, printing, and other facts. Why, oh why, young man or young lady, will you not make photographic records? You will find them of the utmost assistance in further efforts and of much money-saving value.

Readers of PHOTO-ERA know—I have told them often enough—that I am a devotee of the Watkins' Bee Meter; but I repeat that amateurs, or others, not wishing to spend more than seventy-five cents, cannot get greater value and more accurate exposure indications than are given in the Wellcome Photographic Exposure Calculator, Handbook, and Diary.

For the benefit of those who have more money to spend (or invest) and who prefer the visual (extinction) type of exposure indicator, I am told *by experts* that the Justophot (for stills) and Cinophot (for motion-pictures) are very reliable. I bought a Justophot—my eighth variety of exposure indicator—but lost it before I had a chance to give it a thorough test. Or perhaps I was frisked; I was carrying it in my hip pocket the day it disappeared. The number was 4014072. (You may charge regular "reading-notice" rates for this, Mr. Beardsley!)

The use of the Justophot is not unattended with dangers—at times. Instance: One Sunday morning, I was about to photograph a certain bank building, Sunday being the one day of the week on which I would have least difficulty with traffic or parked cars. I had not yet unpacked my camera, which was behind me in a shady entrance to a store from which I was looking toward the bank with my Justophot. A young motor cop dropped right out of the sky, seemingly, and dismounted before me with startling suddenness. He had evidently been sent for. Bank robberies have been all too frequent lately.

He wanted to know why I was looking at that bank through my telescope—he did. And he seemed to want to know *p.d.q.*—he did. He just couldn't wait until I recovered from my surprise, he was so eager for information. His method of inquiry, too, was not at all in accord with his kid gloves. I believe that, after making explanations, I suggested something of the sort to him. And that didn't make him any happier; not a bit. He still treated me as a "suspicious character". After giving him more latitude to display his vocabulary, I finally told him—the fact—that I was making the picture for the Mayor, who handled the advertising for the bank. The cop cooled off. I cooled off later. At that, the youngster was only doing his duty; but he might have been less "rambunctious". Incidentally, I might say that the Mayor had *not* instructed me to make the picture on Sunday. He's a Methodist, or something like that.

Now, where was I—oh, yes, anent this matter of speed ratings, it may not be amiss to tell you that the new Agfa Ultra Special Plate has been speeded up to a maker's rating of H. & D. 850. This world-famous plate has heretofore been the one outstanding plate that has been almost "fool-proof" on the side of overexposure and overdevelopment; now its fool-proofness has been extended downward, except for fools. It is not an orthochromatic or panchromatic emulsion. I cannot refrain from quoting the following from the maker's literature about it:

"As every photographer knows, the fault with most high-speed portrait emulsions is a tendency to "go flat" with overexposure, so that such plates and films must be exposed with far greater accuracy than is true of plates and films of lower speed. This fault is not present in the Agfa Ultra Special

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Plate. While excessive overexposure will give inconvenient density—as compared with disappointing and often unprintable flatness in other fast portrait emulsions—the tone gradations are retained throughout the exposure range."

This plate is made in centimeter sizes from 4.5 x 6 upwards, and it seems to me that it should be an ideal plate for amateur workers with small focal-plane cameras at sporting events.

"Speed" progress among plate-and-film makers is so rapid nowadays that it keeps one busy and almost dizzy to keep informed. And with it all, quality really seems to be keeping pace with the increased speed; in some instances, bettered—softer gradations.

And now comes the new Agfa Portrait Panchromatic Film—Agfa Ansco Corporation, Binghamton, New York—rated H. & D. 700 by the makers, which has shown me more speed than any "pan" I have used, and with gradations, color-values, and printing-quality that are seemingly perfect.

Judging from the H. & D. ratings given, the Agfa Portrait Panchromatic Film is as fast as the Ilford Soft Gradation Panchromatic Plate ("backed") which the makers rate at H. & D. 700 to daylight, H. & D. 2000 to half-watt light. Burroughs Wellcome rates it at 1/24–1/32 and the Agfa Portrait Panchromatic at 1/16–1/24.

"The European expression 'half-watt' lamp or bulb merely means a nitro bulb delivering a candle light to the half-watt. Expressed differently, it is the gas-filled bulb in common use delivering approximate efficiency of one-candle power per half-watt of electricity consumed. A hundred-watt lamp would therefore rate at about two-hundred-candle power. For ordinary color-blind emulsions the artificial light of which we speak is far inferior to daylight, but for ortho and panchromatic emulsions the half-watt lamp is from two to three times faster than daylight."—Blumann's "Photographic Workroom Handbook."

Our dear old friend, the *B. J.*, enthuses over this Ilford plate thus: "In producing a panchromatic plate of colossal speed—to artificial light—and with a much more gentle and more extended scale of gradation, Messrs. Ilford, Ltd., have given the studio-worker at last what must be a close approach to the ideal portrait material. The speed number H. & D., 2000—to half-watt light—sufficiently and clearly indicates the remarkable speed of the new plates; where one second's exposure would be needed with the fastest ordinary studio plates in portraiture by half-watt light, an exposure of about one-third of a second will be sufficient with the new plates." Its value for landscapes and other pictorial work is highly commended by *B. J.*

If the Agfa Portrait Panchromatic Film has an H. & D. rating of 700 daylight, it, too, would doubtless have an H. & D. 2000 rating for half-watt lamps.

I haven't yet tried the Ilford. If I soon get another job—of any considerable proportions—perhaps I can afford a trial dozen of 5 x 7; $2.60 plus about 15 cents postage, probably. It is handled in this country by R. J. Fitzsimons Corporation, 57 Fifth Avenue, New York City. Maybe I'll buy 4 x 5 and use my kits for a try-out. In my portrait work I rarely make my bust images larger than 4 x 5, anyway, all of my larger prints being made by projection.

I am unable to understand the "reason why" for the B-W rating of the Wratten Panchromatic Plate. For six or seven years this excellent plate has been continuously listed at 1/8–1/16, yet we all know that it has been considerably increased in speed and the Eastman development time—as per time card enclosed with each package—has been adjusted to give softer gradations.

The Wratten is the only high-speed panchromatic emulsion which is listed by B-W with a second-column rating—minimum exposure—that is *double* the first-column rating. However, it is a double-coated plate with dyed emulsion; so let us consider the minimum exposure 1/16—fast, indeed—then look at the first-column reading, 1/8, and we see that this plate, according to B-W, will stand relatively more exposure than any other high-speed panchromatic listed by B-W.

It seems to me that the Agfa Special and Ultra Special should be listed the same way, at whatever minimum speeds they may be rated.

Here's another bit of information that will be real news to many of you, or, at least, more concisely complete than any you now have about the following excellent emulsions, all of which I have used extensively. I quote from a letter from the Eastman Kodak Company, September 10, 1930:

"In regard to the speed of the films and plate mentioned, Eastman Portrait Panchromatic Film and Wratten and Wainwright Panchromatic Plates at the present time are

COMMERCIAL ILLUSTRATION

MILTON M BITTER

approximately the same speed, but the emulsions have slightly different characteristics. The Portrait Panchromatic emulsion is recommended for general commercial and portrait work, while the Commercial Panchromatic is recommended where negatives with good strong contrasts are desired. W. & W. Panchromatic Plates are coated with an emulsion that is just between the two film emulsions in contrast."

W. & W. Panchromatic is double-coated.

In my own work, both portraiture and commercial, I find that Defender Panchromatic Film is still the fastest of the American "pans". For normal outdoor subjects, I rate it at Watkins 700 or B. W. 1/24.

I can best tell you what I mean by normal subjects by telling you what is *not* a normal subject. This instance may suffice: A few days ago I was called out to photograph, for legal purposes, a damaged dark green automobile, in full sunlight on the street. My image on the 5 x 7 groundglass filled about three-fourths of the picture length. I made my usual Bee-Meter light-test and, rating my Defender Panchromatic Film at *Watkins 350*, I obtained entirely satisfactory results, one-half my rating for a normal subject. No, a dark green or black automobile, photographed close up to almost fill the plate, is *not* a normal subject.

I have even used this film, Defender, for work which would ordinarily be done on a "process" emulsion. Not so long ago the Esterbrook Pen Company of Camden, New Jersey, sent to me a line-drawing made with one of their pens and India ink, poorly made at that—if originally intended for reproduction, which, perhaps, it was not—by a young art student. Finding that my "process" box was empty, I photographed the drawing on Defender Panchromatic Film, using a W. & W. "A" filter (red), minimum exposure, full development, with slightly stronger developer than usual. After the usual fixing and washing, I gave it a short bath in Farmer's Reducer, only about ten seconds; a little further washing, and the results were perfectly O.K. for an Azo No. 4 glossy print.

By the way, since my invaluable Bee Meter, at 700, almost invariably gives me the same indicated exposure as B. W. 1/24—and pro rata at other ratings—I infer that B. W. ratings—given in fractions—can be converted into Watkins by multiplying the denominator of the B. W. fraction by 30. Thus a B. W. 1/24 is equivalent to a Watkins 720; a B. W. 1/8 to Watkins 240; 250 is the average roll-film group rating by Watkins.

In glancing through the ratings in the 1930 Wellcome booklet, I note that the only plate rated at 1/32 is the Ilford Golden Zenith (isochromatic); but no second-column rating —minimum exposure—is given, thus indicating that, at this high rating, the exposure should be very exact. In the 1931 edition, this plate is on the American market in both standard and centimeter sizes. The makers give it an H. & D. 1400 rating. Wow!

Among the hundreds of plates listed in the 1931 Wellcome booklet, only an even dozen, all "foreigners", have a rating of 1/24, Watkins 720, if my deductions are correct. Defender Panchromatic, for some reason unknown to me, is not yet listed. When it is, I imagine that, to be on the "safe side" for amateurs—for whom this booklet is primarily designed—Wellcome will list it at about B. W. 1/16–1/24. Defender Panchromatic, in my hands at least, has greater latitude on the underexposure side than on that of overexposure.

At least three John Bull Panchromatic filmpacks, beside various "anti-screen" emulsions, are on the American market, from 4½ x 6 centimeters upwards.

What's the matter with *US*? Oh, well, an old-time couplet is running through my brain:

> Be not the first by whom the new is tried,
> Nor yet the last to lay the old aside.

And, once again, what's the matter with *US*—periods or not, as you like—in the matter of cameras? Nowhere in the United States of America, so far as I know, is there made a 5 x 7 camera of the type of the Ica Jewel. the Linhoff, or the great Meyer Universal Silar with its complete equipment of lenses. Why not? These cameras "have everything", including a swing front and a drop bed.

The practice is growing, and growing fast, in up-to-date, studios, both commercial and portrait, to do away with the cumbersome 8 x 10, and make prints by projection from 5 x 7 negatives. There's not only convenience, but economy in that. And in printing by projection, one can exercise greater control— dodging, diffusion, and so on—of the print with far greater ease than in contact printing.

The eminent photographer, Richard T. Dooner, of Philadelphia, tells me that he makes all of his portraits on 5 x 7 film. I have never made an 8 x 10 negative. In making bust portraits, I frequently make two exposures, with a mask, on a 5 x 7 film; and

I make them sharp, getting diffusion, if I wish it, by other means.

To illustrate the value of projection printing, I send an 8 x 10 print made for the Hires Turner Glass Company, Philadelphia, of one of their installations at Riverton, N.J. This is a particularly difficult subject to photograph, the tiling being of glass, vitrified—I think they call it. Here we have a plate-glass mirror, walls of glass—except the wall-paper scenery—above, mosaic floor, white enamel tub, and fittings. The color-scheme is a delicate blue; I forget the colors of the floor. The bathroom is very small; window of fine corrugated glass—if I remember correctly—at left. No artificial light was thrown into the room. Considerable light came in from the adjoining room, where the camera was set up.

Although I "dodged" while making the exposure—moved a piece of flat-black cardboard slowly across the lens several times, beginning on the lighter side of the bathroom—still there was a much denser negative on the left side near the window. This was "evened up" just enough in printing by projection to make the room look natural; and strong lighting on the floor, lower right-hand corner, was handled the same way. In handling lightings of this kind, I usually use a graded color screen, sky-filter; but in this instance, the room was so small I was afraid to attempt it.

The negative was made on 5 x 7 Eastman Portrait Panchromatic film, with the double-development process previously explained in PHOTO-ERA; *i.e.*, underdevelopment, bleaching with Burroughs Wellcome Chromium Intensifier, and redeveloping with weak Amidol, no bromide.

The lens was a 5⅜-inch F/6.3 Plaubel Triple Orthar used with a W. & W. K-2 film between the elements. This lens is not a wide-angle lens, but a regular 5⅜-inch (135 millimeter) lens for a 3¼ x 4¼ plate. It has, like all of the Plaubel lenses, exceptional covering-power. Had I used a regular wide-angle lens, I should have had considerable distortion on the top of the stool in the lower left-hand corner. Data: made late in the afternoon; stop F/32; exposure about 32 seconds for the darker side and double for the lighter side; print on Defender Velour Black Glossy, double weight; print developed with Amidol, using the Wellington Amidol Formula for bromides:

Water	20 ounces
Sod. Sulphite (dry)	325 grains
Amidol	50 grains
10% Pot. Brom.	100 minims

The Photographic Adventures of Bert and Ray

XIX—The Problem of Photographing Moving Objects

NEIL WAYNE NORTHEY

[In addition to their other camera activities, Bert and Ray observe the first Sunday in each month as a special "camera day", which is devoted to some kind of photographic work, regardless of outside influences. While, at times, the weather and other things are not exactly favorable to the carrying out of their plans, sometimes even forcing them to give up outside camera work and work indoors, still they can always find something to do. At other times, circumstances really help them by furnishing an opportunity to try something new. Such was the case when the January "camera day" rolled around, as you will see.—EDITOR.]

WELL, it looks as if one thing at least is going to be in our favor", said Bert, as he joined Ray in the workroom in the basement of Ray's home.

"What's that?" asked Ray.

"The sun. It's difficult enough to make exposures of moving objects in midwinter, even with the sun at its best. But I guess Old Sol will be with us today."

"I hope so", said Ray. "If he isn't, it will mean that we will have to choose between underexposure and blurred images. If we cut the exposure short enough to stop motion, it is sure to underexpose unless the light is good. And of the two evils I believe I should choose the blur. An undertimed negative is hopeless, while one with a blurred image will simply be detrimental at its worst. At least, there would be something to see."

It is an interesting fact that there is a certain attraction about moving objects which seems to challenge the hand-camera worker. Perhaps it is the desire to match his skill against time and space; or it may be that he wishes to test the capabilities of his lens and shutter, in most cases not even giving his instrument an even chance, because of a lack of thought beforehand.

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Like other amateurs, Bert and Ray welcomed any new thing which tried their skill. But they were different from some in this respect: they believed in studying the situation first and then going ahead, instead of exposing a lot of negatives or doing something else and then trying to figure out why a thing was wrong. They worked on the principle that it was too late to right a thing after it was done.

And so it was not surprising that, when they made plans for making pictures at the local Ice Carnival, which happened to fall on their January "camera day", they went into the matter with their usual thoroughness. Ray especially liked to think things out ahead of time, and Bert usually left that part of the work to him.

The occasion of the Ice Carnival was doubly welcome, because it came at a time when most camera users, however enthusiastic, needed an incentive to keep them active. The Ice Carnival had the added attraction of furnishing moving objects to be photographed. There would be skaters in action, skiers jumping, an iceboat race, competitions of various kinds, and tobogganing. It was two hours before the main events were to start, and the winter light needed about that much time to grow in intensity. And so the boys sat down to consider matters while they waited on time.

"Here are a few ideas and figures I have jotted down, which I thought would save time and negatives when we start to work", said Ray, and he produced a piece of paper.

Bert took the paper and read, "First ascertain the normal exposure for still objects."

"I mean by that", explained Ray, "that we will take a reading with our exposure meters as a basis from which to work. Say we find the exposure requires 1/100-second at F/8, which will probably be about right for this time of year, and with snow on the ground."

"What's this table you have here?" asked Bert.

"That's a table of shutter speeds which are required for various moving objects. It's based on the one given in our *'Wellcome' Photographic Exposure Record*. You see, there are three factors which enter into the making of exposures of moving objects which are not found in still pictures—the speed of the object, the direction it is moving in relation to the lens, and the distance between the object and the lens in relation to movement. And so, to simplify calculations, we can give certain factors a fixed value as a point from which to estimate. First, we know that a certain amount of light will be required, and we will say that this value is 1/100-second at F/8. If we wish to reduce the exposure time to 1/200-second, which is the fastest your Kawee shutter will permit, we will simply use twice as large a stop, or F/5.6, which is approximately it. Now we also know that a certain shutter speed will be required for a given exposure, depending upon the three factors I just named. One of these, the speed of the object, we cannot control; but we can regulate the direction it travels in relation to the lens, and we can also govern the distance.

"Wait a minute", interrupted Bert. "What have direction and distance got to do with it?"

"Why, they determine the rate of movement of the image across the film, of course", said Ray. "You understand that for every foot per second that the object travels across the scene there will be a proportionate movement of the image on the film."

"Certainly."

"Well, if an object is traveling directly toward the lens, or nearly so, the *cross movement* of the image is almost eliminated, and all that is left is the movement of the various *parts* of the object."

"Yes, that's right", agreed Bert.

"But if for some reason we want a side view of the object, or if there are several objects like skaters traveling in different directions, so that a front view of all of them is impossible, then we must either reduce the exposure time or get farther back. As 1/200-second is the fastest our shutter will operate, for swiftly moving objects it would mean that we must get farther back. Of course, the farther back we move the smaller will be the image on the film; but I would prefer to have it fully timed and fairly sharp, even though it is small, than to have it lacking in detail, blurred, and large."

"So would I, because we can enlarge it, if the negative is good", said Bert.

"Now we don't want to get back unnecessarily far and make smaller pictures than need be, and neither do we want to cut down the exposure unduly and risk underexposure. We have already established an exposure value of 1/100-second at F/8 or its equivalent. In that table I have used 25 feet as an arbitrary distance from lens to object, and have made it for a five-inch lens, which is

HIS LONG BILL — SORAB J. KHAREGAT

HONORABLE MENTION—OUR MONTHLY COMPETITION

about the focal length of your Kawee. If we want to use it with a different focal length, all we need to do is to multiply the figure by 5 and divide by the focal length of the lens used."

"Suppose we want to make an exposure of an object moving across the field at about 30 miles per hour—say a row of skaters. Our table says that an exposure of 1/450-second would be required at 50 feet."

"I wonder how they figure that", said Bert.

"Well, an object moving 30 miles per hour would travel—let's see—there are 63,360 inches in a mile, and 30 times that would be 1,900,800 inches; divide that by 3,600 seconds in an hour, and that gives us 528 inches it would travel per second. At 50 feet the object would be 600 inches, or 120 focal lengths of a 5-inch lens away. In other words, the image would travel across the film 1/120 as far as the object traveled in one second, or 4.4 inches. Now it is generally conceded that more movement in the image than 1/100-inch is objectionable, and especially if the negative is to be used for enlarging. So we see that with the image moving 4.4 inches per second across the film, we have 440 times as much movement as would be permissible. In other words, we would have to give 1/440-second exposure to stop it, or say 1/450 to allow for error in judging speed and in shutter operation."

"Boy, you're there with the figures all right! But we have only 1/200-second on our shutters", said Bert.

"That doesn't matter", said Ray. "We have our choice of three things. We can photograph the objects coming directly toward us, giving, as our table shows, 1/150-second. Or we can photograph them coming or going slightly obliquely and give 1/200. Or we can step back to 100 feet and snap them moving across the field at 1/200. You see, every time you double the distance you can double the

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exposure time. Perhaps they would not be going thirty miles per hour, or we might put up with more than 1/100-inch blur."

"Yeh, and the farther back we are, the greater depth of focus we have; but that isn't so important with a short-focus lens", said Bert.

"Not unless the objects are moving at a fast rate toward or away from the lens", added Ray. "Then they might get out of focus before we snapped."

"It would be handy if we had a depth of field scale", suggested Bert.

"It seems to me I clipped one and pasted it in the darkroom notebook some time ago—let's see—yes, here it is." And Ray opened the notebook on the table before them.

"Here is one that applies in a general way to all cameras making pictures 3¼ x 4¼, which fits mine", said Bert. "I'll just copy off the figures we will use most and take them along."

Here are the figures Bert took:

Stop used	F/4.5	F/5.6	F/8
Distance focused upon	*Feet*	*Feet*	*Feet*
25 ft.	20 –34	19 –37	17½–46
15 ft.	13 –17¾	12½–18½	11¾–20½
10 ft.	9½–11	9 –11½	8½–12

Stop used	F/11	F/16
Distance focused upon	*Feet*	*Feet*
25 ft.	15½–68	13½–inf.
15 ft.	10¾–24	9½–34
10 ft.	8 –13	7½–15

"That's a handy scale to carry all the time", said Bert. "I believe I'll just glue it in my Exposure Record, and then I'll have it with me. Then if I am making an exposure and want near and distant objects to show at the same time, I can tell just where to set the focus scale and what stop to use."

"That's a good idea", said Ray. "I believe I'll take a few figures that apply to my 3-A Kodak."

And so Ray copied:

Stop used	F/6.3	F/8	F/11
Distance focused upon	*Feet*	*Feet*	*Feet*
25. ft.	21 –31	20 –34	19 –40
15 ft.	13½–17	13 –18	12 –19
12 ft.	10¾–13	10½–13½	10¼–14½

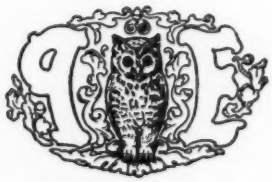
Stop used	F/16	F/22
Distance focused upon	*Feet*	*Feet*
25 ft.	17 –52	15–93
15 ft.	11 –21	10–26
12 ft.	9¾–16	9–18

"Here's another way that scale will be useful", said Ray. "It will show how accurate I must be in judging distances when I set the focus scale, or in other words how much latitude I will have at a certain stop."

"That's right", said Bert. "Now if we are all ready, let's amble over to the lake and see if there are any signs of activity."

And so the boys went over to the lake to put into practice the photographic information which they had obtained and discussed with mutual profit.

(To be continued)



AFTERNOON—LAKE CHOCORUA A. H. BEARDSLEY

Speaking of Photography

I. Against-the-Light Effects

A. H. BEARDSLEY

THE instruction-book which accompanies every new camera that is sold, and the many excellent beginners' textbooks, cannot be commended too highly for laying great stress on photographic fundamentals. Their purpose, and very rightly so, is to point the straight and narrow way which, if followed by the beginner, will bring him safely to photographic success. It is not my purpose for one moment to suggest any other method to the beginner. By all means let him follow the time-tested and well-marked course. However, there is a certain amount of contrariness, even in the best of us. We grant the justice or soundness of a rule; yet, at times, we get a real thrill by doing the very thing we are told not to do. It is not the purpose of this article to determine whether the motivating purpose of this contrariness is due to human perversity or simply a consuming desire to see what will happen. The fact remains that, after going some distance along the well-marked highway of photographic success, my attention was attracted to a number of very picturesque and appealing byways. In turning off the main road, I realised that I was opening the door to censure from the faithful followers of the instruction books and beginners' manuals. However, the die was cast, and I was off to explore some of the byways of photography. It is my intention to record my experience for the benefit of those who may or may not decide to profit by my departure from the beaten track.

All good instruction books advise the beginner to have the source of light at his back or side when making an exposure. Good advice, and it should be followed. Nevertheless, I am somewhat in the same position as the reverend clergyman who, before prohibition, was reproached by the church deacons for partaking a bit too freely. His reply was, "Go tell the members of my church to do as

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I say, not as I do!" Hence I say, "Read and follow the rules of the instruction book; and do not do as I do, unless you wish to get a thrill out of trying to make pictures that are different!"

Whether it was perversity or curiosity we shall not discuss here; but I was consumed with a tremendous desire to see what would happen if I pointed my camera at the source of light. I soon found out. Never before or since have I seen such weird negatives. There were streaks, round spots, strange, fantastic zigzag markings, and fogged areas which defy description. For a time I was filled with deep misgiving. Perhaps, after all, I was wrong in having the hardihood to disobey the time-tested instruction book. However, I was just contrary enough to put another filmpack in my camera and make some more exposures against the source of light. By this time I had come to understand something of the power of light and that it must be controlled as far as possible to prevent fogging and spoiling the film. Consequently I used clouds, trees, hills, rocks, parts of buildings and other "screens" to keep the light from shining too brightly into the lens. Paper and metal sunshades are excellent accessories to use around the lens to reduce halation; but with the exception of my hat or some friend's shading back, I have never used a sunshade, as recommended by many leading pictorialists. Doubtless my pictures would be better if made with the lens properly shaded; but, as yet, I have not added a sunshade to my equipment. Incidentally, I have not used any filters or panchromatic plates or films. My against-the-light effects, which illustrate this article, were all made without any accessories or special sensitive material. The pictures selected are not included as examples of pictorial photography, but as effects which were obtained with regular equipment. In some cases the effect was heightened in the enlarging and in the developing. The illustrations are offered not so much as shining examples but as guideposts along one of the most beautiful of all photographic byways.

It seemed to me that the best way to serve my readers would be to describe the making of each picture and give such data as would be of interest. Therefore, let us begin with "The Old Man of the Mountain" in Franconia Notch. When I arrived at this famous spot in the White Mountain Region of New Hampshire, the sun was directly to the upper left of the "Great Stone Face". The light was strong; but by walking up and down the road, I finally found a place where an opening in the trees allowed a clear view of the silhouette. The original negative was horizontal; but by enlarging the 3¼ x 4¼ negative up to 11 x 14 and placing an 8 x 10 piece of bromide paper in the center of the picture-area, I was able to make a vertical picture out of the horizontal original negative. This well-known spot in New Hampshire is perhaps one of the most photographed natural wonders in the United States. Many beautiful and striking pictures have been made of the "Old Man" from points of vantage; but mine was made from the main highway within twenty feet of where my car was parked. For this picture I used my 3¼ x 4¼ Revolving Back Graflex, fitted with F/4.5 Carl Zeiss Tessar lens.

"Moonlight-Effect" was made one afternoon about four o'clock after landing on Little Barn Door Island, Lake Winnepesaukee. Looking out through the underbrush toward Rattlesnake Island, the shimmering water caught my eye and I decided to see what would happen. The sun was fairly high and out of the picture area; but there were no clouds to cut down the light. However, I stopped the lens in my Graflex down to F/16 and speeded the shutter up to 1/200. The result was rather a thin negative; but when printed dark, the effect of moonlight is suggested.

"Across Meader Cove", Lake Winnepesaukee, is an illustration of the diffusing effect of a large cloud. A moment after the exposure was made from a motorboat, the sun came out from behind the cloud and it was altogether too bright. It is interesting to match your wits with the sun and to make the exposure at the right moment for the best effect. This is an 8 x 10 enlargement from a 2¼ x 3¼ negative made with a Kawee camera fitted with a Carl Zeiss Tessar F/4.5 lens.

"Afternoon—Lake Chocorua" is an example of utilising a tree-trunk to cut down the source of light, so that other parts of the subject may be reasonably well recorded. This is an afternoon picture made about four o'clock, just as the shadows were beginning to lengthen across the slopes of Mount Chocorua and extend down into the valleys below. In this case I used my 2¼ x 3¼ Revolving Back Graflex with Kodak Anastigmat F/4.5 lens.

"The Broads in Winter", Lake Winnepesaukee, very nearly approximates some

The Sunburst
Moonlight-Effect

Snow-Squall Coming
The Broads in Winter

AGAINST-THE-LIGHT EFFECTS — A. H. BEARDSLEY

of the Byrd Antarctic Expedition photographs. The glistening ice, and my companion at the lower right, do suggest a scene near the Arctic Circle. However, the scene was in our own New Hampshire late in January, when Lake Winnepesaukee wears its winter dress. The sun was almost too strong, and in the original print there is a suggestion of a circle of halation. However, here again I wished to see what would happen. On this trip, I used my Vest-Pocket Expert Ansco Camera, 2¼ x 3¼, fitted with Modico F/7.5 lens.

"Snow-Squall Coming", Lake Winnepesaukee, illustrates how a generally murky sky may be used to control the source of light and aid in obtaining interesting effects. This picture was made early on an afternoon when violent snow-squalls followed one another across the frozen lake. At first, the patches

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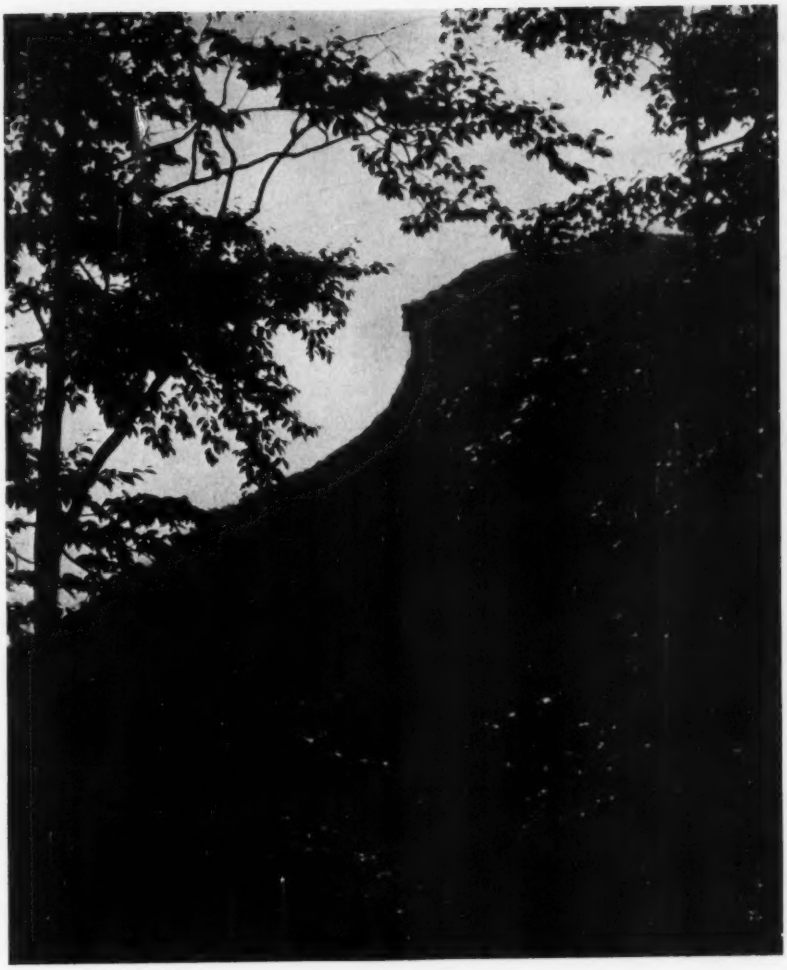
ACROSS MEADER COVE — A. H. BEARDSLEY

of light on the ice may look as though they were put in with a retouching brush. However, that is not the case. An inspection of the negative will show that the lens caught these reflections exactly as shown in the reproduction. Ansco Vest-Pocket Camera was used.

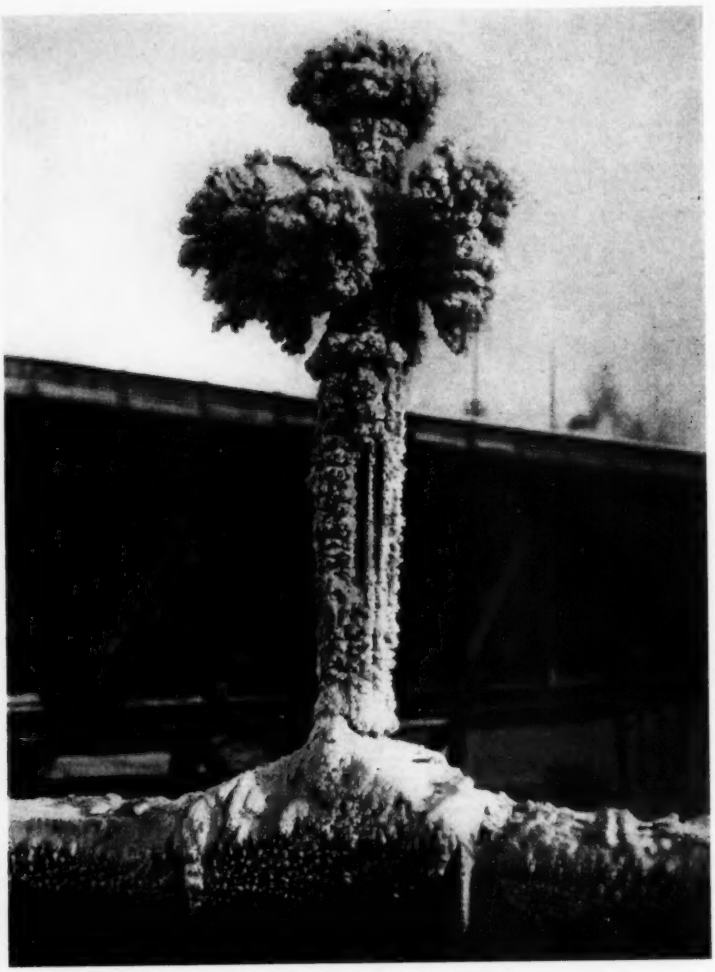
"The Sunburst", Lake Winnepesaukee, is an attempt to catch the spectacular features of a sunburst. Unfortunately, the motorboat in which I was cruising around did not have a vibrationless engine. While making the exposure I thoughtlessly rested the camera on the rail and thus obtained a blurred foreground. However, the picture will serve as a suggestion. I used my Kawee with Carl Zeiss Tessar lens for this exposure.

Let me repeat that, in making these illustrations, no filter and no anti-screen or panchromatic filmpacks were used. My purpose was to see what could be done with the several outfits without any accessories. In doing so, I do not wish my readers to assume that I fail to appreciate the practical value and benefit of filters and panchromatic material. By all means, let those who can enjoy these accessories use them. However, I had in mind the large number of amateur photographers who have neither the time nor the inclination to master the correct use of filters and panchromatic plates or films. For their benefit this article was prepared; and may it encourage them to try similar effects with whatever equipment they may have!

Frankly, I do not know just what I shall select for next month's photographic chat; but I shall try to find a subject which will be of practical service. Let me make it clear that the purpose of this series is to avoid technicalities as much as possible and to treat the subjects in the informal manner in which a group of friends might do around the open wood-fire in the living-room. With the greatest respect for the immeasurably valuable work being done by our scientific technicians, it has been my experience that the majority of amateur and professional photographers are more interested in how to use equipment in the field than they are in how their outfits were made or what optical and chemical laws governed their manufacture. And so, I shall try to make these monthly photographic chats interesting, helpful, and inspirational in character, remembering always that there is no finer fellowship than that which comes through the art and the science of photography. There are many beginners and amateur photographers who do not seem to realise that they are in a position to equal, if not surpass, the pictorial work which they admire. All that is needed is the determination to begin and the courage to keep on trying.



OLD MAN OF THE MOUNTAIN
A. H. BEARDSLEY



THE FROST KING'S HANDIWORK
HERBERT LACEY

EDITORIAL

Happy Photographic New Year!

THE energy consumed in vain regret over the past will very often carry us a long way toward the opportunities of the future. Whether our disappointments and losses have been great or small, regret alone will not remedy matters. What we need is renewed courage and the opportunity for a fresh start. To be sure, this may not replenish our bank account; but will a pessimistic attitude do any more for us?

On the other hand, if the past year has been good to us, we are faced with the responsibility to measure up to the good fortune we have had.

Perhaps our photographic year that is past was filled with failures and bitter disappointments. We may even have been on the point of giving up photography altogether. If that is the position in which we find ourselves at the beginning of the new year, let us right-about face. Instead of regretting, let us be planning to prove to ourselves that we can make good pictures. The new year furnishes a splendid white page, on which nothing of the past is recorded. We have it in our power to determine what shall be written on that page.

Some will grant the point; but what can be done about it until next summer? Why wait until next summer? With modern cameras, lenses, sensitive material, and accessories, photography during the winter months is every bit as interesting and enjoyable as it is during the vacation season of the year. But it is cold, you say. Very well, it is not necessary to go out of doors. Modern artificial illumination, cleverly designed especially for the photographer, enables him to make pictures anywhere and at any time. At-home portraiture, indoor industrial and advertising illustration, table-top photography, copying, and scientific studies in photomicrography are open to those who dread the cold weather out of doors.

However, there are those who relish the clear, cold winter days out in the open. There are snowshoeing, skiing, skating, bob-sledding, tobogganing, sleigh-riding, and just hiking across the hills to be enjoyed. There is action aplenty, and yet there are countless opportunities for splendid pictorial effects. Again, we wish to remind the photographer that modern cameras, lenses, sensitive material, and accessories make photographic success virtually a certainty. Wait until next summer? No, indeed, indoor and outdoor photographic opportunities are at hand, now!

Photographic Fellowships

WE honor and respect the man or the woman who has been found worthy to receive an F.R.P.S., or other recognition of scientific or artistic achievement in photography. However, as we do a little retrospecting in connection with the year that is past, we are deeply impressed by the increasing number of photographic fellowships which have their origin in the heart instead of in a photographic society or educational institution. Perhaps there is nothing finer about photography than the splendid friendships which it brings about between men, women, and children. The camera seems to make the whole world kin. We rejoice in many photographic fellowships and are glad that we have been found worthy to receive them. No certificate of award accompanies them, and there are no letters to place after our name; but we are content because our fellowships have come unsought from the very heart of friendship.

We believe that nothing will do more for the growth and prosperity of photography than the cultivation of photographic fellowships between individuals, camera clubs, photographic dealers and manufacturers. After all, we are interdependent. No one individual or group can carry the burden alone. Each of us has his particular niche in the great scheme of things; but we need our neighbor as much as he needs us. And so, let us make a New Year's resolution to go more than halfway to cultivate photographic fellowships, to the end that we may enjoy prosperity and know the full measure of that priceless possession—a true friend!

XUM

OUR MONTHLY COMPETITION

Closing the 5th day of every month
Address all prints to PHOTO-ERA MAGAZINE, Monthly Competition
Wolfeboro, New Hampshire, U.S.A.

Awards

First Place	10 Points
Second Place	7 Points
Third Place	5 Points
Honorable Mention	4 Points

(*a*) The person having the highest number of points at the end of the year, December 15, 1931, will receive an engraved silver cup; the next two highest, smaller engraved silver cups; and the next five highest, one-year subscriptions to PHOTO-ERA MAGAZINE.

(*b*) *All who win awards receive Certificates.*

(*c*) Those who win an Honorable Mention Award and are *not regular subscribers, or have not been regular subscribers,* will receive PHOTO-ERA MAGAZINE for six months, with the compliments of the publishers.

(*d*) No competition-pictures are sold, exchanged, or the halftone-plates sold without permission, in writing, from the maker of the print. Proceeds of all sales, *excepting halftones,* go to the maker of the picture.

(*e*) All competition-pictures not returned are used to make up the PHOTO-ERA PICTURE EXHIBIT which is sent to schools, libraries, museums, camera clubs, and to responsible organisations for exhibition-purposes, *free of cost.*

Rules

1. This competition is free and open to all.

2. Not more than two subjects may be entered. *Composition, exposure, and photo-finishing must be done by the competitor.*

3. Mounts must not be larger than 16 x 20 inches. Prints may be mounted or unmounted.

4. Each print must bear on the back the maker's name and address, and the title of the picture, and should be accompanied by a letter, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer, and printing-process. Enclose return postage. *Entries which do not comply with this rule will be omitted.* Data blanks sent at request.

5. Prints receiving points become the property of PHOTO-ERA MAGAZINE, unless for special reasons. This does not prevent the photographer from disposing of other prints from such negatives after he shall have received official recognition.

Photo-Era Competition Cup

6. Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces is sent with data.

7. Overseas competitors may send prints for several competitions at the same time. This will facilitate packing and reduce transportation charges.

AWARDS—OUR MONTHLY COMPETITION

Subject—MISCELLANEOUS
Closed November 5, 1930

First Place	J. K. Hodges
Second Place	Dr. Irving B. Ellis
Third Place	Arthur M. Underwood

Honorable Mention: J. M. Banerjee; Mrs. R. O. Bethune; Paul Bras; Alexander Clair; C. H. Clapper; J. A. Couty; J. Daniels; R. W. Dawson; Carl Demaree; James M. Dille; William J. Ennever; Harry B. Fisher; E. P. Fleming; E. Graham; Earl Gray; Edward L. Gockeler; Arthur W. Grumbine; Dr. Kelley Hale; M. Itoh; R. P. Jarrett; Sorab J. Kharegat; Fred G. Korth; Arthur J. Lang; Isidore Levitan; Walter Lipkau; Melvin Martinson; F. Meyer; A. E. Moebs; M. G. Monani; C. Nabuco; W. C. Niesen; N. Okada; W. H. C. Pillsbury; J. B. Priddy; Gaston Remy; Mr. Reyes; Corrado Sallustio; K. E. Skinner; James Simpson; Yoneo Usami; Martin Vos; J. C. Wedekind; Gino Zenier.

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STAMPEDE
J. K. HODGES
FIRST PLACE—OUR MONTHLY COMPETITION

STILL LIFE AND DEATH — DR. IRVING B. ELLIS
SECOND PLACE—OUR MONTHLY COMPETITION

PRINCE VON HINDENBURG — ARTHUR M. UNDERWOOD
THIRD PLACE—OUR MONTHLY COMPETITION

THE COMPETITION SCOREBOARD

NOVEMBER 5, 1930

J. K. Hodges	10 points	Sorab J. Kharegat	4 points
Dr. Irving B. Ellis	7 "	Fred G. Korth	4 "
Arthur M. Underwood	5 "	Arthur J. Lang	4 "
J. M. Banerjee	4 "	Isidore Levitan	4 "
Mrs. R. O. Bethune	4 "	Walter Lipkau	4 "
Paul Bras	4 "	Melvin Martinson	4 "
Alexander Clair	4 "	F. Meyer	4 "
C. H. Clapper	4 "	A. E. Moebs	4 "
J. A. Couty	4 "	M. G. Monani	4 "
J. Daniels	4 "	C. Nabuco	4 "
R. W. Dawson	4 "	W. C. Niesen	4 "
Carl Demaree	4 "	N. Okada	4 "
James M. Dille	4 "	W. H. C. Pillsbury	4 "
William J. Ennever	4 "	J. B. Priddy	4 "
Harry B. Fisher	4 "	Gaston Remy	4 "
E. P. Fleming	4 "	Mr. Reyes	4 "
E. Graham	4 "	Corrado Sallustio	4 "
Earl Gray	4 "	K. E. Skinner	4 "
Edward L. Gockeler	4 "	James Simpson	4 "
Arthur W. Grumbine	4 "	Yoneo Usami	4 "
Dr. Kelley Hale	4 "	Martin Vos	4 "
M. Itoh	4 "	J. C. Wedekind	4 "
R. R. Jarrett	4 "	Gino Zenier	4 "

COMPOSITION — LEONARD PURIN

XUM

OUR ILLUSTRATIONS

A. H. BEARDSLEY

As we begin the new year in this department, we have reason to be glad and reason to feel deep regret. We are glad that improved business conditions are being felt; but we are filled with sincere regret that these improved conditions necessitated the following letter, which explains itself:

BOSTON, December 6, 1930.

Dear Friend Beardsley:

With much regret I am obliged to inform you that it will be impossible for me to edit "Our Illustrations" department next year. I am under extreme pressure in business, owing to the conditions of the times, which require intense concentration. I have enjoyed the work very much, and being associated with you in this way. It has been a pleasure to be affiliated with you, in the work of making PHOTO-ERA MAGAZINE useful to the craft. Possibly, at a later time, I can resume the work, if you should wish it.

Hoping this will find you in the best of health, and with very best personal good wishes for yourself and PHOTO-ERA, I remain, as ever

Very sincerely,
ERNEST H. WASHBURN.

For a time, at least, the Editor will try to carry on for Mr. Washburn, in the hope that he will find it possible to be with us again very soon. It has been a real pleasure to work with Mr. Washburn, and we know from many sources that his kindly, helpful reviews have been sincerely appreciated by our readers. We realise that it will not be easy to take up this department and to equal the excellent work which Mr. Washburn has done. We shall try very hard, and ask the indulgence of our readers until we feel more at home in this department than we do this month.

The series of "Why I Am a Pictorial Photographer" is beginning another year, and interest has not slackened on the part of either the contributors or the readers. We have received many letters expressing keen appreciation of this series and of the splendid co-operation which has been given by so many of the leading pictorialists in all parts of the country. The Fort Dearborn Camera Club is noted for its activity as a club and for the remarkable pictorial records which many of its members have made in the salons and exhibitions of the world. Outstanding among these is Dr. Max Thorek, F.R.P.S., who, according to the 1931 American Annual of Photography, is credited with having exhibited in 141 salons and having produced 725 prints during the past five years. This month, L. H. Longwell gives us his reasons for being a pictorial photographer; and his record of salons and prints, exhibited since 1925 to the present time, is an excellent one and has added greatly to the prestige of the Fort Dearborn Camera Club. The picture of the "Churchyard", which Mr. Longwell sent to accompany his article, has received recognition at a number of salons, and is a rather unusual example of composition or design. The very fact that he boldly utilises straight and curved lines, dark areas and highlights, indicates that he believes in portraying things as they appeal to him, and in so doing he derives pleasure from pictorial photography. There will be those who question the strength of the composition and who will feel that there are too many conflicting objects in the picture-area. Whether one agrees or not with this opinion, the fact remains that we have a striking picture which cannot fail to hold the attention. Data: Made July, good light, 3¼ x 4¼ Graphic Camera, 5½-inch Zeiss Tessar lens, stop F/4.5, 1/10-second exposure, Agfa filmpack, M.Q. developer, Ansco Contest Paper.

In these days of railroads, automobiles, and airplanes, it is rather refreshing to glance backward among the hills of New England, where now and again one still may meet a team of oxen. Mr. Topalian, whose residence is in Ogunquit, Maine, was fortunate, indeed, to see the splendid yoke of oxen which he has portrayed so successfully in his picture, "A New England Ox-Team". He made the most of his opportunity and has recorded a rapidly disappearing feature of New England life. We believe that more attention should be given to making photographic records of the life and customs of a generation which all too soon may be forgotten. Data: Compact Graflex 3¼ x 5½, December, 3 P.M., weak light, 7½-inch Zeiss Tessar lens, 1/25-second, stop F/8, Kodak filmpack, Pyro Soda developer, No. 1 P.M.C. Contrast Bromide.

Mr. Ponting's excellent examples of the various stages in the process of building up an exhibition print will doubtless be of much practical value to those who enjoy working up their pictorial studies. Many of our readers have mentioned the practical help they have been receiving from Mr. Ponting's interesting series of articles. Complete data will be found in the article.

The increasing popularity of panchromatic plates and films and the reasons therefore are well brought out by Mr. Trego's interesting illustrations and diagrams. Greater familiarity with the handling of panchromatic material will undoubtedly result in greatly improved pictorial effects. "Pan" films and plates merit all the attention that is being given to them today.

Margaret Parsons has offered a number of striking travel-pictures, a number of which possess pictorial value. Those of our readers who are travelers or who are planning trips overseas, or in this country, will profit by a study of these pictorial snapshots made on the Riviera. Incidentally, we have several exceptional articles by the same author which will follow very soon.

The remarkable commercial illustration made by Milton M. Bitter demonstrates convincingly how effectively modern lenses and photographic ma-

terial meet difficult conditions. However, back of it all is the skill and knowledge of an expert craftsman, who is ever seeking to improve his work.

From Bombay, India, we have the splendid picture of a pelican, entitled "His Long Bill". Mr. Kharegat has succeeded in producing an exceptional close-up of this interesting bird. The detail in the bill and the texture of the feathers are well rendered, and altogether we have an excellent nature-study picture.

Data: Exposure 1/25-second, stop F/5.6, auto-filter plate, K-1½ filter, enlarged on Royal White Bromide Paper. Make of camera and lens not stated.

The illustrations which accompany the Editor's article were selected primarily to bring out points mentioned in his article.

"Afternoon, Lake Chocorua" illustrates utilising a tree trunk to prevent the sun from shining into the lens, thus enabling the photographer to obtain a so-called moonlight effect. Data: 2¼ x 3¼ Revolving-Back Graflex with Kodak Anastigmat F/4.5 lens, August 4 P.M., stop 16, 1/25-second, Agfa filmpack, Ansco Glossy Bromide, Rodinal developer for negative and print.

In the group of against-the-light effects we have "The Sunburst", which is another illustration of using clouds to diffuse the direct rays of the sun. Data: 2¼ x 3¼ Kawee with Carl Zeiss Tessar F/4.5 anastigmat lens, July, 4 P.M., stop F/8, 1/25-second, Agfa filmpack, Ansco Glossy Bromide, Rodinal developer for negative and print. "Moonlight-Effect" shows the result of pointing the camera at sunlight on the water with the sun being sufficiently high to be out of the picture. Data: 3¼ x 4¼ Revolving Back Graflex, Carl Zeiss Tessar lens, August, 3.30 P.M., F/16, 1/200-second, Novabrom Press Bromide, Rodinal developer for negative and print. A thin negative was the result, which upon being overprinted produced the moonlight effect. "Snow-Squall Coming" is an example of utilising a generally cloudy condition to diffuse the light and yet allow enough of it to be recorded on the patches of clear ice out on the lake. Data: Ansco Vest-Pocket camera, Modico F/7.5 lens, Eastman rollfilm. January, 2.30 P.M., Ansco Glossy Bromide, Rodinal developer for negative and print. "The Broads in Winter" is another illustration of using generally cloudy conditions to diffuse the light sufficiently to avoid halation and at the same time retain sufficient brilliancy out on the expanse of frozen lake. Data: Vest-Pocket Expert Ansco Camera, 2¼ x 3¼, fitted with Modico F/7.5 lens; January, 3.30 P.M., Agfa filmpack, Novabrom Press Bromide, Rodinal developer.

"Across Meader Cove" illustrates the use of a cloud in subduing the direct rays of the sun, thereby bringing out the cloud texture. Data: Kawee 2¼ x 3¼ camera, with Carl Zeiss Tessar F/4.5 lens, Eastman rollfilm; 4.30 P.M., July; 1/25-second; stop, F/16; Novabrom Press Bromide Rodinal developer for negative and print.

"Old Man of the Mountain" is an illustration of the advisability at times of enlarging a subject to a large size, and then by careful placing of a smaller sheet of bromide paper, taking out the center of interest. The original negative was a horizontal 3¼ x 4¼, but was made into a vertical picture by utilising the center of the greatly enlarged negative. Data: Revolving Back Auto-Graflex 3¼ x 4¼, Zeiss Tessar lens, July, 1 P.M., stop F/16, 1/25-second, Agfa filmpack, enlarged on Novabrom Press Bromide, Rodinal developer for negative and print.

"The Frost King's Handiwork" is a striking illustration of the beauty which often may be found in the commonplace. Ordinarily a street-light would attract comparatively little attention; but as the result of the accumulation of what appears to be a heavy coating of frost, the street-lamp is transformed into a thing of beauty. Mr. Lacey is to be complimented upon grasping the right moment to record for the pleasure of others that which appealed to him because of its unusual features. After all, much of the pleasure of photography is sharing with others the beauty we have been privileged to see. Data: February, 11 A.M., dim light, Korona View Camera 5 x 7, 8½-inch Turner-Reich lens, stop F/16, K-1 filter, ½-second exposure, Eastman Commercial Panchromatic film, M.Q. developer, Azo No. 4 paper.

Our Monthly Competition

"STAMPEDE" is a striking picture, which doubtless may be a familiar scene to a number of our Western readers; but to most of us it has a strong appeal because of its action and magnificent setting in the Canadian Rockies. The work of Mr. Hodges is familiar to our readers, as he has been a consistent participant in our competitions. We doubt whether he has recently submitted a print possessing greater dramatic values than the present one. Among the many excellent pictures submitted in this competition, "Stampede" stood out as unquestionably worthy of first award. Data: 3¼ x 4¼ Ica camera, Carl Zeiss lens, July, 2 P.M., hazy light, 1/200-second, stop F/4.5, filmpack, Pyro Soda, enlarged on Veltex.

"Still-Life and Death" is an original conception on the part of Dr. Ellis, who tells a story which is convincing. With rare skill he has succeeded in placing the emphasis where it belongs, and at the same time he has succeeded in retaining a soft, beautiful background, which adds immeasurably to the composition. It is a difficult subject well handled. Those who may be inclined to doubt the pictorial abilities of the humble box camera are urged to read the accompanying data carefully. Data: 2A Box Brownie, 2¼ x 4¼, Single Meniscus lens, smallest stop, December, 3 P.M., bright sun outside, windows at right and left sides, exposure one second, Eastman rollfilm, Eastman D-7 developer, enlarged on Haloid Portraya Black.

"Prince Von Hindenburg" is an exceptional dog picture which fairly radiates life, and the intelligence and alertness of the subject. Mr. Underwood states that the dog was well trained and easy to pose; and he adds that the intent expression on the face of the dog was caused by a cat walking across the yard at the moment of exposure; but the dog knew better than to disobey his master and chase the cat. Data: 16.5 C. M. Zeiss Tessar lens, 3¼ x 4¼ film, weak sunlight, July 4, 1/200-second, Eastman Portrait Panchromatic film, developed in desensitised Metol Pyro, Portrait Bromide enlargement, overexposed about five times, and developer diluted about 8 to 1 to soften the contrast. Background made of tracing cloth drawn tight on frame.

XUM

THE EDITOR'S CORNER

Greetings from Everywhere

As these lines are being written, it is only a matter of a few days before Christmas, 1930. This issue, although dated January, 1931, had to be prepared and printed a number of weeks before the arrival of the New Year. In consequence, in this number we can acknowledge only those greetings which have arrived up to the time of writing this paragraph. In the February number we can give more adequate thanks. However, we did not wish those who sent us their messages of good will, early, to feel that we failed to appreciate each and every one that arrived. Greetings have already reached us from many countries overseas and from all parts of the United States and Canada. It has touched us deeply to receive so many greetings from readers who seem to be glad that they belong to the PHOTO-ERA family.

"Our Illustrations"

IT is with regret that we must announce Mr. Washburn's inability to continue as editor of the department "Our Illustrations". We are glad, for his sake, that business conditions have improved with him to such a point that his time is taxed too heavily to permit even the avocation of editing this department. Our loss is his gain, we hope sincerely. Nevertheless, we are looking forward to his early return; and, to that end, we are going to try carrying on for him as best we can. It will take an issue or two for us to become somewhat accustomed to our new duties. It is especially difficult to follow a man who set such an excellent pace as Mr. Washburn. We are absolutely in sympathy with his kindly criticisms and his sincere desire to be constructive rather than destructive. Perhaps, for that very reason, neither Mr. Washburn nor the Editor seem to have been—or probably ever will be—heralded as great critics. Unfortunately, neither of us has forgotten his own early struggles in photography and, try as we may, we cannot bring ourselves to adopt the cold, impersonal form of pictorial criticism which, many appear to believe, marks the truly great critic. We simply cannot get away from a longing for hearty good-fellowship, even in our criticisms; and so we shall carry on with a sincere effort to be of real service, and let others decide upon the qualifications of a really great critic.

"Speaking of Photography"

ELSEWHERE in this issue the Editor has added to his troubles by beginning a series of informal photographic chats under the general title, "Speaking of Photography". Frankly, the Editor is in the same position as the man who calmly lit his pipe while sitting unknowingly on a powder barrel —he is not quite sure in what direction he is headed. However, we hope to make these monthly "experience meetings" of sufficient interest and practical value to make their preparation worth while. Suggestions for future topics will be heartily welcomed. If possible, let us visualise a group of friends who have gathered in a living-room. Prints, enlargements, cameras, and photographic accessories cover tables or chairs and are being passed around among the members of the group. Some are discussing lenses, others the making of enlargements, and still others the relative merits of plates and films. In such circumstances, there is the best of good-fellowship and informality, and yet a rich fund of practical information is obtained for the benefit of all. And so, the Editor is on his way with a series of articles which he sincerely hopes will be aided and abetted by suggestions from his readers.

Our Thirty-Third Year Begins

ON the Editor's desk is a bound volume which contains Volumes I and II of PHOTO-ERA MAGAZINE, from May, 1898, to May, 1899. Two volumes to the year has been the policy since 1898 and, therefore, with 1931 we begin our sixty-sixth volume. Each volume covers six months—the first, January to June, and the second July to December, inclusive. A glance through the pages of the bound volumes on file reveals many interesting things. Perhaps nothing impresses the reader more than the remarkable progress that has been made in photographic equipment and the improved pictorial quality of the illustrations. The Editor has been associated with PHOTO-ERA MAGAZINE since December, 1916; and, in the fifteen years up to the present time, it seems to him that photographic progress has been even more rapid than it was from 1898 to 1916. It is a good thing, at times, to stop a moment and try to determine our position in relation to the years which seem to come and go with ever-increasing rapidity.

Bad Beginning, Good Ending

SOMEWHERE, and at some time, a reputed wise man is reported to have said, "A bad beginning often results in a good ending", or words to that effect. Probably his thought was that we should not be discouraged by a poor start. Many a football team has won the game during the last few minutes of play. If January, 1931, looks none too bright, it does not follow that December, 1931, will be filled with gloom. In fact, we may be blinded by December's wonderful radiance, reflected from health, happiness, and prosperity. Photographically and otherwise, the smooth, white page of 1931 lies blank before us. Let us not be discouraged if we spill a little ink or smudge the paper as we begin to write.

XUM

THE MONTH IN APPLIED PHOTOGRAPHY

C. B. NEBLETTE, F.R.P.S.
Division of Photography, A.M., College of Texas

Photomicrography with Ultra-Violet Light

ALTHOUGH it is now a little over a quarter of a century since apparatus for photomicrography with ultra-violet light was first placed on the market, its possibilities are only just being realised. This has been due very largely to the difficulties met with in the use of the ultra-violet equipment. The technique of ultra-violet photomicrography is vastly more exacting in its requirements than ordinary photomicrography; and, unless the technique is exactly followed, the results are far inferior to that obtained with ordinary methods. Many who attempted the use of the ultra-violet equipment, on meeting with repeated failures, finally gave up in disgust. Hardly a half-dozen photomicrographers in all the world mastered the technique of ultra-violet photomicrography and were able to make effective use of the equipment.

The efforts of the photomicrographers to use ultra-violet equipment arose from the need for greater resolution in much advanced research work. It must be remembered that simply increasing the degree of magnification does not always increase the amount of detail which we can see or photograph. The delineation of fine detail depends upon what is termed the resolution of the objective. Increased magnification without increased resolution is useless; not only does it not reveal any additional detail, it tends to confuse that which is already shown. Now the maximum degree of resolution depends upon the numerical aperture of the lens and the mean wave-length of the source of illumination. Little or no increase in numerical aperture has been obtained since the work of Abbe nearly fifty years ago; nor do the prospects for any increase appear more favorable today. This leaves us, therefore, with but one means of securing increased resolution—namely, the use of light or shorter wave-length. Some increase in resolution is obtained if we use blue or violet light instead of ordinary incandescent electric light or arc light, but still greater resolution may be obtained by using ultra-violet light.

A microscope for use with ultra-violet light cannot be made of glass, however, for glass is opaque to ultra-violet. Quartz, or fluorite substances through which ultra-violet light can pass, must be used. Such objectives were designed by Kohler of Jena in 1904, and these were placed upon the market by Carl Zeiss. The source of ultra-violet light for use with these objectives is produced by an electric spark between electrodes of magnesium, which has a bright line at 275λ in the ultra-violet. The remainder of the magnesium spectrum is cut out by a system of prisms and diaphragms which allow only this one bright line at 275λ to reach the objective.

As the image is invisible, a "searcher" eyepiece containing a small piece of uranium glass which fluoresces in ultra-violet light is used to view the image. The image in this eyepiece is so dull, however, that it can be used practically only to determine whether part of the subject desired is in the field of the objective and if the focus is approximately correct. The final focusing is a matter of trial and error; the fine-focusing adjustment is changed a few degrees between each negative and the plates developed and examined. The ultra-violet microscope is very critical as to focus; there is none of the latitude that is permissible in ordinary photomicrography.

For biological work, the use of ultra-violet light has still another advantage besides that of increased resolution—the possibility of dealing with living organisms. It has been found that many—in fact most—living organisms which show but little or no contrast in visible light are revealed as perfectly in ultra-violet light as if stained. This constitutes a great advantage to the biologist, for with living organisms none of the staining, hardening, drying, or fixing commonly employed in preparing subjects for microscopic study is possible. With the ultra-violet equipment, the living organism is simply placed in any suitable fluid, such as water, normal saline or Ringer's solution, and the photograph is made of the living organism unaltered by any staining, hardening, or fixing process. Ultra-violet light is in effect its own staining medium, with the advantage that the organism itself is not affected.

Ultra-violet light of the intensity used for photomicrography is, except in the case of a very few single cell organisms, without harmful effects on living cells. Living cell cultures have been exposed to the ultra-violet light used for photomicrography for as long as 45 minutes without any apparent harmful effects.

The sharply defined plane, corresponding to what the photographer terms depth-of-focus, with the ultra-violet microscope is only about one-quarter of a micron (a micron is 1/1000 of a millimeter). Details above or below this plane focused on do not interfere. This makes it possible to section a transparent specimen optically, and by making a number of exposures focused on adjacent planes of the subject it is possible to show the details of structure in each separate plane of the subject from one side to the other.

Archæological Air Photography in Sweden

WE related in this department several months ago how the value of aërial photography to the archæologist was discovered more or less accidentally by a member of the British Expeditionary forces in Palestine during the World War, and how it has since been employed to good advantage in the study of the Roman and early Celtic towns of England and the prehistoric Indian towns and irrigation system of our own Southwest.

XUM

An aërial survey of the Swedish island of Oland, which has sixteen known sites of early Viking fortifications and towns, was made during the past summer by Dr. Marten Stenberger, who for the last seven years has been making a study of this island. The aërial survey has disclosed the fact, hitherto unrealised, that all of the houses of these towns were built around a rectangle or square. This type of building was common during the Middle Ages, but these ruins most certainly are older than that. Traces of devastation and forceful evacuation of towns are also in evidence. All of the studies go to show that there was in existence more than a thousand years ago the rudiments of a Viking Empire of which history has no record. There are remains of Roman glassware, and coins of the various emperors, Trajan, Hadrian, and Aurelius. There are also Arabic coins of a somewhat later date; and at several places, particularly on the island of Gothland off the southeast coast of Sweden, excavations of ancient forts or cathedrals have revealed traces of an earlier construction beneath the present; and in one or two cases there is still another—all of which seems to indicate a more closely knit government, a more extensive communication with other countries, and a higher degree of civilisation than present-day history records. These discoveries will no doubt in time also disclose many important facts regarding the tremendous southward migration of the Goths in the fifth and sixth centuries.

School-Film Experiment a Success

Successful development of the experimental distribution of an educational film to schools, undertaken last year under the auspices of the College Affairs Committee of the Academy of Motion Picture Arts and Sciences, has been reported during the past two months.

Thirty-two prints have been distributed to twenty public schools and State university visual education departments throughout the country. Additional orders are being filled, as received, but emphasis is placed on securing reports from the schools as to their experience in the use of the film as it represents an outstanding experiment in visual education. The film is used only in connection with regular classroom work, and not for showing where any admission is charged.

The film is titled "In the Days of Chivalry" and includes scenes edited from the photoplay "Robin Hood." The very careful historical research which went into the making of the picture was a major consideration in its selection. Use of the original negative was given by Douglas Fairbanks, past president of the Academy, with the request that the material therein be edited so as to be of maximum usefulness to the school children studying the historical period. From the eight-reel photoplay, 885 feet of scenes were taken, centering about the spectacular medieval tournament.

School departments now using one or more prints of the reel include: Fresno, Iowa State College, Kansas City, Missouri; Long Beach, City of Los Angeles, County of Los Angeles, University of Minnesota, Oakland, Pasadena, San Diego, San Francisco, San Jose, University of Wisconsin, Santa Clara, University of Kansas, Buffalo, New York; and Cleveland, Ohio.

The experimental film had its origin in the contact of the Los Angeles and University of California Departments of visual education with the Academy and with several studios a year ago.

With the rapid expansion of the motion-picture industry, and particularly with the introduction of the sound picture, less attention has been paid to providing pictures for the educational field, which, despite its great sociological importance, is limited commercially. While such organisations as Eastman Teaching Films and the Yale University group, which sponsored the "Chronicles of America", have produced visual aids of highest quality and utility in the schools, the supply and variety have necessarily been limited and the costs comparatively high.

All the while there have been many photoplays produced which, in spite of the fact that they were prepared for the theater, contain elements of value in the study of art, history, literature, and other school subjects. Divested of the story and theme incident to a photoplay, they may be adapted to a classroom presentation most effectively. This is especially true of those photoplays in which the authentic life and customs of historical periods have been graphically reconstructed for the screen. Most of the silent pictures of this type have been withdrawn from service during the past two years.

That many thousands of feet in the vaults of the production companies could be of great value in the schools of America has been the increasing conviction of educators. When the project of testing the adaptability of the idea was brought before the Academy some months ago, it was decided worthy of a trial. Under the sponsorship of the Committee on College Affairs, an editing committee was chosen from local visual education officials and the project carried through to its present development. The editing committee which has acted in an advisory capacity throughout the project included: Charles Roach, Director of Visual Education in the Los Angeles City Schools; Marian Isreal, Assistant Director of Visual Education, Los Angeles County Schools; Harry H. Haworth, Supervisor of Visual Education, Pasadena Public Schools; Marian Evans, Director of Visual Education, San Diego City Schools, and Donald Gledhill of the Academy staff. A booklet of correlated information and teaching aids was compiled by Annette Glick of the Los Angeles School Department and is available to Academy members and others who may be interested in the project. *Academy Bulletin.*

Thanks to Flying

Photo-finishers have appreciated, for some years, the fact that aviation attracts snapshooters. Every clear day, hundreds of people visit local airports, to shoot right and left at aircraft on the ground and aloft.

An indication of the importance of aviation to photo-supply and finishing shops is to be had in the fact that there were more than 80,000 snapshots made of the dirigible "Vigilant" during its five-month stay at St. Petersburg, Fla., last winter. Wise dealers and studio men can capitalise on this tremendous public interest in flying. *Rexo.*

XUM

LONDON LETTER

CARINE AND WILL CADBY

"A Hundred Years of Photography"—this was the attractive title of a lecture to be given at Portland Hall, Regent Street Polytechnic. Photographic lectures are functions we have successfully avoided for many years. We still remember the delightful glow of enthusiasm that pervaded us when first we attended such meetings. Just home from a three-year ramble in what were then the Colonies—South Africa, Australia, and New Zealand, with what we thought striking photographs of the then almost unknown life out there—we went to one of the Regent Street Polytechnic meetings at which a cold and rigid mental atmosphere seemed to surround the speakers and where microscopic details of technical work took up the whole evening. A dull and docile audience sat it out without any signs of comprehension or appreciation.

And so we must admit we went to hear all about "A Hundred Years of Photography" the other night rather in fear and trembling. But things have happily changed since our young days, and the lecturer led us through the century quite brightly, pointing out that one hundred years ago there was no photographic industry, now an enormous and very important undertaking, the development of which has made the management of kinematography by the amateur as easy as the making of ordinary snapshots.

The lecture was enlivened by a light vein of thought, Dr. Clark pointing out that all processes that change color or tone by exposure to light are really photographic processes. And so when we expose our bodies to sunshine in a bathing costume we are indulging in a sort of personal photographic printing, although the process is not at all permanent.

Some various and interesting items of information were given. Calves yield us the gelatine for the very fast emulsions. Daguerreotypes have never been surpassed in artistic quality by any process since invented. No really satisfactory color-process on paper is yet available for amateurs, nor likely to be for years to come.

As showing the speed of present-day press-work, flashlight photographs were made during the lecture—notably a portrait of the chairman—and enlarged prints from the negatives were handed around for inspection within a quarter of an hour, although the photographer had to leave the building and cross Regent Street to develop and print. An attractive exhibit was a wet-plate negative made forty years ago and yet in a state of perfect preservation; and a print from it, made on modern printing material, demonstrated the beautiful quality by the wet-plate process.

We have always been interested in Kodak's young men. In our photographic activities we have often been brought in touch with them, and almost without exception we have watched their rapid advance in their careers. Whoever chooses them must have a flair for judging character and a belief that youth can deal satisfactorily with responsibility if allowed a free hand. Some of these young men create their own jobs, and, while experimenting, can feel that they have the hearty backing of this generous firm behind them.

Mr. Frank Smythe of the Kangchenjunga Expedition was on the staff of Kodak before he was sent out by the *Times* as official photographer. He has a short article relating some of his experiences in this month's *Kodak Magazine*, illustrated with twelve of his photographs. They are so intensely interesting that one cannot help regretting their small size—nine on a page! Surely we might have been given one full-page picture; for, at least, half of them would have gained enormously by being enlarged. One knows the editor's difficulty when bringing out a special "Overseas" number like this, with exceptionally interesting matter and illustrations; but we wish he had saved Mr. Smythe's contribution for the star turn in an ordinary number.

The obvious idea of enlarging is that if a small print is good, a larger one of the same negative will be better, and the reverse; that an unattractive subject larger still will be still uglier. But not at all; anyhow, experience has taught us that this theory does not hold water. Some charming small prints provide heart-breaking disillusionments when enlarged, all the mystery and charm evaporating with the bellows extension. Today we are realising the reverse, when a small interior has been turned into a whole-plate print. It was one of those quite correct but somehow unconvincing studies all of us at times achieve. With enlargement, its prosaicness has disappeared, and attractive detail that was unnoticeable, when small, has emphasised the reason for making the picture.

However, back to Mr. Smythe's prints. Of his work one can say with certainty that his subjects would all gain enormously by being ten times the size shown us in the *Kodak Magazine*. He suggests the vastness of his subjects when he writes: "Never have I felt so conscious of my inadequacy as a photographer as when I pressed the shutter on that amazing view." Having had some experience in photographing snow mountains, we know the difficulties under normal European conditions; so that we realise the heroism of this photographer working in such high altitudes that every movement was a big effort. He tells us that the simple act of getting the camera out of his pocket and opening it was so exhausting that it left him almost too breathless and spent even to be able to think of exposure and aperture, much less decide on them. Almost, but not quite; for has he not brought back hundreds of excellently exposed photographs?

When we read the accounts of this international expedition in the papers, we were always especially interested in Mr. Smythe, for he was not only a photographer but an English one at that; and we

(*Continued on next page*)

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HERE, THERE AND EVERYWHERE

To ensure publication, announcements and reports should be sent in not later than the 5th of the preceding month.

Andrée Films Teach Valuable Fact

More than a passing interest has been created by the discovery of the bodies of the members of the lost Andrée Balloon Expedition of 1897, and with the moving weeks there comes the news of the development of twenty films found among the remains of the expedition on Danes Island. Many questions have come to me, because of the fact that my friends are familiar with my Arctic expeditions. They are something along these lines: "How is it that the films are good after thirty-three years?" "Why is it that present-day films are only good for a year or so?" The answer to this question may also provide some pointers for the care of your films in low temperatures, during winter hunting trips, sleighing, or ski-sports, or in similar instances.

The fact of the matter is that films, if kept in the cold, will remain good for an indefinite period of time, if they are sealed in containers to prevent dampness. This introduction of dampness, the archenemy of all photographic apparatus in connection with a winter climate, such as is found in the Arctic Islands or in Northern Europe or North America, seems to assume a possibility that is not met with. You say, "Well, I know enough not to get the pictures wet." That is not the thing that ruins negatives which have been shown capable of remaining in good shape for thirty-three years, as Andrée's did. Here is how it happens.

We will say that you have a hunting lodge out in the wilderness; the temperature outside is something like 40 below. Inside of your shelter you have a roaring fire, and you manage to keep the heat up to around sixty degrees. The difference in temperature is evident; in fact, it is quite marked—one hundred degrees to be exact. The metallic parts on the camera or on the film-case, when brought into the circle of the heat, immediately condense the moisture with which the interior of the dwelling is impregnated, and the result is that the camera or the film-container is soon covered with a coating of frost. The coating of frost may not be suspected by the ordinary photographic craftsman, and the result is that when the camera or other portion of the apparatus assumes the temperature of the room, it is covered with a coat of moisture that is just as deadly to the film, the lenses, or the remainder of the equipment, as if it had been thrown into a bucket of water.

As long as the Andrée films were left in the containers in the ruins of the boat, or outside the tent, where they might have the protecting cold about them, they were preserved as important records for this 1930 story of the Arctic martyrs.

The practical-minded people who wish to derive a definite hint from this answer to the questions above have asked: "Well, supposing I want to make a picture inside the cabin about the fire; what then? Will it come out?"

Of course, it will come out, if you will follow a simple procedure. Load the camera outside the cabin, even though you do freeze your fingers a bit, and then bring the camera in and lay it on the floor. This is always the coldest part of the cabin. After it has been standing near the door for a short time, gradually move it along the floor toward the stove or fireplace. When the frost has formed, and just as it is about to melt, bring it up to the fire, so that it will permit of the moisture evaporating as fast as it forms. Extra films should be brought up to the stove immediately.

Here is an interesting lesson from the experience of the first Arctic balloon adventurer, for the cold-weather photographer of today. Copyright, 1930.

Charles S. Strong.

London Letter

(*Continued from preceding page*)

always hoped that the courage and modesty he showed were attributes of his craft and his country.

The Camera Club in London has been holding its members' exhibition, and very good—especially technically—some of its exhibits are. The winner of the President's cup this year is Mr. J. R. H. Weaver, for a very excellent architectural subject.

One of the most alive members of the Camera Club in the old days was Reginald Craigie, who used to give cheery and stimulating parties there. It is sad to think that this veteran photographer, who did so much to raise the status of amateur photography here and was for so many years such a genius of a secretary to the Salon, has passed away. We have seldom met such a buoyant and lovable personality. When we saw him about two months ago, he seemed to be enjoying every minute of his life, and was full of plans and amusing stories. He was a confirmed optimist, with a spirit of humor that lifted him high over all the minor tragedies of life. We have lost in him a very dear and most entertaining friend.

Army Officer to Study "Talkies"

Captain F. W. Hoorn, U. S. Signal Corps, has been designated by Major-General George S. Gibbs to study talking-picture production, so that he will be qualified to supervise the Army instruction studio to be established in Washington, D.C.

Captain Hoorn is now in Hollywood, and will be introduced to those who are participating through the Academy in the formation and supervision of a course of instruction which will meet the needs of the War Department. He is a graduate of the University of Minnesota and of Yale University and has been trained as an electrical engineer.

The plan is that Captain Hoorn will study here for the next several months on all aspects of production, receiving opportunities for observation and experience through the co-operation of various studios.

Upon the return of Mr. Cowan, manager of the Technical Bureau, Academy of Motion-Picture Arts and Sciences, an explicit course of instruction will be worked out in advisement with studio executives and Academy members.

Academy Bulletin.

New York Institute of Photography Teaches Making of Sound Pictures

"READY?" "O. K." "Up to speed." "Action. Camera!" Any day now, in the studios of the New York Institute of Photography, 10 West 33d Street, New York City, these expressions, generally associated with the motion-picture lot, may be heard. The Institute has just completed installation of equipment for the making of sound-pictures, the synchronisation being accomplished under practically the same conditions faced by the cameraman in the professional field.

Sound is recorded on celluloid records mounted on a turntable synchronised to 1,440 frames of film per minute. Under the system employed, a "play-back" is possible within thirty seconds after a conversation has been recorded. Initial performances of sound "shots" made with the new equipment disclose the finished product to be letter perfect as to synchronisation, when screened.

With the installation of the sound-equipment, Samuel F. Falk, president of the New York Institute of Photography, points out that the school now offers complete instruction in the making of sound-pictures to both personal-attendance and home-study pupils. A miniature theatrical set, complete in every detail, together with regular motion-picture studio lighting, is maintained for use by students and for experimental purposes.

Because of the popularity of talking pictures, evidently here to stay, the New York Institute finds that hundreds of men are desirous of entering the new field of sound photography, according to Mr. Falk. In addition to the new course in sound-photography, the Institute offers personal-attendance and home-study courses covering the entire field of professional photography, commercial, news, and studio portraiture.

Photo-Era Trophy Cup Scores

THE new monthly competition got away to a flying start and was judged on December 5. It is a matter of interest that the number of prints submitted was even larger than in several previous competitions. Even those who questioned the advisability of the change in competition subject and rules were sportsmen enough to submit prints in order to give the new competition experiment a fair trial. There were many evidences that contestants had entered prints simply for love of the game rather than any rewards which they might receive. In short, the new monthly competition is not so much a prize-contest as it is a friendly matching of prints with one's neighbor in the effort to receive mutual benefit and pleasure from the experience.

"Our Monthly Competition", which was judged on December 5, was remarkable for its variety of subject-material and originality. Although "Miscellaneous" was the subject—and will continue to be until further notice—the pictorial quality and technique of the entire collection of prints was unusually good. In this issue the "Competition Scoreboard" makes its appearance with the purpose of keeping our readers informed of the individual scores of all contestants who receive awards. We are always open to any suggestions with regard to competition rules and scoring which will help us to be of service to the majority of our readers.

First Place in the December competition was won by E. J. G. Schermerhorn of Malang, Java; not a member of a camera club. Leonard Purin of the Fort Dearborn Camera Club received Second Place; and Hifumu Miyamoto, not a camera club member, Third Place. With regard to Honorable Mention Awards, the Fort Dearborn Camera Club received eight; Cleveland Photographic Society, two; and Brooklyn Institute, one. Again the Fort Dearborn Camera Club has scored heavily, simply through weight of numbers and pictorial ability. This club is determined to win permanent possession of the PHOTO-ERA TROPHY CUP and is working hard to that end. We wonder whether the other camera clubs will let them win the cup without any real race for it. According to our records, the standing of the clubs, as of December 5, 1930, is as follows:

Fort Dearborn Camera Club	9	points
Photographic Club of Baltimore	1½	points
Orymca Camera Club	1½	points
Brooklyn Institute	1	point
Cleveland Photographic Society	1	point
Schenectady Camera Club	1	point

Charles S. Strong to Have Exhibition

AN interesting and instructive photographic exhibition will be opened by Charles S. Strong, well-known traveler, author, explorer, and lecturer, at the Major Studios, New York City, on Sunday evening, January 4, 1931, and will run until January 17. There will be no admission charge.

The exhibition will include selected subjects from Mr. Strong's world tours and will present scenes and subjects in many lands, photographed under unusual conditions. Among the more than thirty photographs will be many selected by the rotogravure editors of the *New York Herald-Tribune, Minneapolis Journal, St. Paul Pioneer Press, Los Angeles Times, Toronto (Ontario) Saturday Night*, and other papers; by the editors of PHOTO-ERA MAGAZINE, *The Mentor, International Studio, Nomad, Travel, The Nautical Gazette*, and other magazines for publication in their pages. Several of the pictures which have won diplomas and prizes will also be on exhibition.

MR. Strong will be present, during the presentation, to answer questions with regard to the exhibit and to offer suggestions to photographers who may desire information.

Our readers will be interested to know that Mr. Strong has written another article for PHOTO-ERA MAGAZINE, entitled "Cameraloguing Alaska and the Canadian Northwest".

XUM

Photoflash Lamp Prices Reduced

A SUBSTANTIAL price reduction on the new Photoflash lamp, already in wide use as the flash-source for flashlight photographs, has been announced by the General Electric Company. The lamp, formerly retailing at 40 cents, now lists at 25 cents. This reduction, it is pointed out by J. E. Kewley, acting general manager of the Incandescent Lamp Department of the General Electric Company, will greatly accelerate the market for this new product.

It is explained that the rapidly increasing use of the Photoflash lamp for both professional and amateur flashlight photography is responsible for the substantial price reduction. The fact that the practically instantaneous flash provided by the lamp is confined entirely within the bulb, and that there is consequently no fire hazard, has opened new fields to flashlight photography where the making of flashlight photographs has been prohibited previously. The Photoflash lamp has already been used successfully in flashlight photography in such places as the New York subway and other locations heretofore inaccessible for such work.

A Worthy, Timely Movement

As a means of counteracting communistic and other radical propaganda, the extensive spreading of which is now recognised by all thinking people, The United States Flag Association, whose honorary head is the President of the United States, has inaugurated a nation-wide movement for the distribution, particularly among the youth of the country, of specially prepared patriotic literature. The co-operation of patriotic societies, military units, civic bodies, women's clubs, and other organisations is solicited in the undertaking. The plan not only enables posts, chapters, and other local units of patriotic societies to energise their own programs of work by promoting American patriotism and good citizenship in their respective communities, but it also affords them a splendid opportunity to give employment to their unemployed or needy members, and, if desired, to replenish their treasuries. Full details can be obtained from national headquarters of The United States Flag Association, 923 Fifteenth Street, N.W., Washington, D.C.

Remarkable Telephotograph Demonstration

PHOTOGRAPHERS in five cities were initiated into the mysteries of the telephotograph process of transmitting photographs by wire during a recent nation-wide co-operative demonstration staged by five local photographic clubs.

The demonstration took place on Monday, November 10, 1930, when the five clubs held meetings as nearly simultaneously as possible, and exchanged pictures with each other over the telephoto wires. The Clubs were situated in Cleveland, Chicago, St. Louis, Los Angeles, and San Francisco.

The arrangements were originally conceived by the Commercial Photographers Association of Cleveland, and were carried out by the American Telephone and Telegraph Company in conjunction with the Photographers International Association of America. This was not only the first nation-wide hook-up of telephoto wires, but also the most far-reaching and important co-operative effort between local clubs yet attempted.

The idea began when Charles L. Abel and H. C. McMullan, president and secretary, respectively, of the Cleveland Club, made arrangements for a telephoto demonstration to be given in the Ohio Bell Telephone Company Building in Cleveland, to which all members of the Club were to be invited.

Having conceived the notion of transmitting a picture during the demonstration, the Cleveland Club officers approached the International Association and the telephone company with the plan. Both agreed that the idea was excellent.

International headquarters immediately telegraphed the secretaries of local photographic clubs in cities in which a branch of the telephoto service is maintained. Answers were received from four clubs, which called special meetings to stage telephoto demonstrations in their own cities.

The five clubs participating were the Commercial Photographers Association of Cleveland, the Commercial Photographers Association of Chicago, the Photographers Association of Greater St. Louis, the Commercial Photographers Association of Los Angeles, and the Commercial Photographers Association of San Francisco.

Each club sent a photograph to the other four clubs in the hook-up. Due to the difference in time between the Far Western States and those east of the Mississippi, the Los Angeles and San Francisco Clubs sent out photographs ahead of their meetings, but received the photographs from the other cities while they were meeting.

The International Association has sent its thanks to the presidents of the participating clubs for their co-operation. There is no limit to the number of marvelous activities possible, when photographers stick together!

"Retailers' Expenses"

WE have been informed that the Chamber of Commerce of the United States of America has recently issued a revised and enlarged edition of "Retailers' Expenses". This is a pamphlet which covers thirteen lines of business, among which photographic studios are included. This pamphlet has been prepared specifically to be of practical service to retailers, and the Chamber of Commerce hopes to give it the widest possible circulation. The pamphlet has 137 pages and sells for 50 cents. Copies and further information may be obtained by addressing Domestic Distribution Department, Chamber of Commerce of the United States, Washington, D.C.

International Association Joins Morse-Draper Commemoration

EARLY in 1932 an international celebration, in memory of two pioneers in photography and telegraphy, will be staged by the New York University, in co-operation with several of the greatest business organisations, scientific societies, and trade associations in the country.

The men to be honored are Professors Samuel F. B. Morse and John Draper, both of whom

early in the nineteenth century were on the staff of the New York University. Draper is said to have been the first man to make a photograph in this country, and it was his sister who is supposed to have been the sitter on that historical occasion when a daguerreotype plate was first exposed.

Among the organisations which will make this commemoration possible will be the Photographers International Association of America. Besides the New York University, the other organisations include the Radio Corporation of America, the Motion-Picture Producers and Distributors of America, the Smithsonian Institution, Postal Telegraph Company, Western Union, and so on.

The Morse-Draper Commemoration will officially last for a few days, but its many activities will provide international publicity for several months during 1932. It is not planned to have an exhibition in one city alone—exhibitions, radio hook-ups, newspaper articles, mass meetings, traveling displays, special lectures, etc., will spread propaganda for photography and telegraphy all over the civilised world.

It is still a bit early for the Photographers International Association of America to announce any concrete plans in connection with this commemoration. It is enough to say that organised photography will be given perhaps the greatest publicity that it has ever received before. Every opportunity will be given for members of the International Association to tie up with this tremendous campaign.

The names of Morse and Draper, and their part in scientific and artistic history, will become household words.

Photographers' Association, Orange County, Calif.

Photographers from all parts of the country, including a delegation from Long Beach, attended the regular meeting of the Photographers' Association of Orange County, Calif., held at the Orient Café, situated on the Anaheim-Santa Ana State highway. President Edward W. Cochems of Santa Ana presided. The meeting was well attended, with over thirty-five present.

The program was preceded by a brief business session, devoted to the reading of reports bearing upon membership and matters affecting the administration of the organisation. It was also announced that, on account of the rush of business incidental to the holiday season, there would be no meeting in December, and that a special meeting would be called early in January by the president, at which time an election of officers will be held for the ensuing year.

Earl S. Morrow, district manager of the Southern California Telephone Company, gave an interesting talk on the history of early photography. Mr. Morrow's exhibition of Civil War and Custer battlefield photographs, as made by the wet-plate process by William Brady, Civil War photographer, was highly interesting. The father of Mr. Morrow was a contemporary and understudy of Brady. As Brady's assistant and coworker, both men were many times under fire and were subjected to many narrow escapes from death.

Appearing on the entertainment program were Arthur Cannon, pianist; Miss Gertrude Wyman, vocal soloist; pupils of Miss Gertrude Stebbins, dancing teacher; and Mrs. Melba Woods, accompanist.

In closing, the president said in part: "As the year draws to a close, we are entering upon the second milestone since the birth of our organisation. We have had a phenomenal growth in membership and have enjoyed two pleasant years of loyal-hearted support and social good-fellowship, sincere harmony, and good will due to your cooperation and loyal attendance. Let us continue unwaveringly, with renewed efforts for the coming year, and mark the added success and prestige of our organisation!"

Surgical Movies Gain Official Recognition

That the surgical motion-picture has arrived at a point not only of widespread use but also of official recognition is the statement of William F. Kruse, head of the Educational Department of the Bell & Howell Co., Chicago, following the twentieth annual Clinical Congress of the American College of Surgeons, held at Philadelphia recently.

During the five days of this meeting, seven official motion-picture programs were presented under the auspices of the College's Committee on Motion-Pictures. Twenty-five different films were included on these programs, six of them being talkies. An audience of over three hundred was always to be counted on, and frequently the roof garden at the Bellevue-Stratford, where the pictures were shown, was taxed to far more than capacity.

One of the official Congress lectures over the radio was delivered by Dr. P. E. Truesdale, of Fall River, Mass., who spoke enthusiastically of the part played by the motion-picture in the education of medical students. Dr. William Ernest Miles, noted British surgeon, gave the movies splendid recognition in showing his excellent three-reel (16-millimeter) film depicting the technique employed in the cancer operation bearing his name.

Much interest was aroused by operation-pictures shown in full color, and made under artificial light by surgeons themselves with amateur equipment. One booth conducted a continuous showing of approximately fifty operation-films made by surgeons, and conducted a new type of "clinic" that is becoming increasingly popular at surgical, medical, and dental conventions—the motion-picture clinic.

Somewhere in Canada

Somewhere in Canada a certain C. P. S. member was spending his vacation. Having heard that a nationally-known photo-pictorialist was camping in the immediate vicinity, he made it his business to stop at each farm he came to and make inquiries.

Calling at one cottage, he asked if there were any photo-pictorialists in the neighborhood.

"Well, sir, I don't rightly know, but my husband shot some strange creature the other night, and its skin is on the barn door; you might take a look at that." *Thru The Darkroom Door.*

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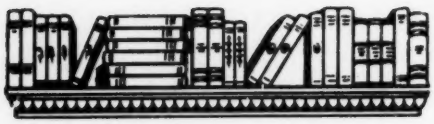

BOOK-REVIEWS

Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices. Send for our list of approved books

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PHOTOGRAPHY, ITS PRINCIPLES AND PRACTICE, by C. B. Neblette, F.R.P.S. Second Edition. 615 Pages, 205 illustrations and diagrams. Price, cloth, $6.50. New York: D. Van Nostrand Company, Inc.

The second edition of Mr. Neblette's splendid volume on photography is now off the press, and it will be found to be of even greater interest and practical value than the first edition, which was so well received. Obviously, photography is an art and a science which does not and cannot stand still. No sooner is a book published which contains the last word on the subject than a new method or new equipment is made known. Therefore, Mr. Neblette's first volume, which was first published in 1927, needed revision to bring it up to date. This has been well done by Mr. Neblette, who has capitalised the suggestions and criticisms of his first effort. The text-matter, where required, has been entirely rewritten, and new methods have been fully described. In consequence, the second edition may be said to be one of the most authoritative, complete, and practical photographic textbooks now available. It is not too deep for the average beginner, and yet it is complete and thorough enough to satisfy the scientific photographic technician. As a photographic textbook, for use in scientific departments in educational institutions, it will be found to meet an immediate need. Its arrangement and subject material have been specifically planned for classroom work. Altogether, the second edition of Mr. Neblette's volume should be heartily welcomed not only by amateur and professional photographers but by the rapidly increasing number of teachers and students who are interested in photography as a science and as an art. We believe that the second edition will enjoy as great popularity and approval as was accorded the first edition.

THE CINÉ CAMERA, by Herbert C. McKay, F.R.P.S. Ciné Amateur Series, No. 1. 88 Pages, 16 illustrations. Price, cloth, $1.00. New York: Falk Publishing Company, Inc.

Our readers will be especially interested in a new series of books now being prepared by Herbert C. McKay, F.R.P.S., editor of our own amateur motion-picture department, "The Amateur Kinematographer". Mr. McKay is director of the New York Institute of Photography, and after twenty-one years of activity in all branches of photography he is eminently qualified to prepare a series of books for amateur motion-picture enthusiasts. The first volume, just issued, and entitled "The Ciné Camera", is a small, neatly printed book, which deals in detail with the matter of cameras used by and suited to amateur kinematographers. After considering the leading types of cameras, the author continues with a clear and helpful discussion of camera lenses and the use of filters. In succeeding chapters the interesting subjects of mastering one's camera, exposure, focusing, lighting, handling the camera and the subject, with a concluding chapter on special branches of ciné work, are presented in a popular yet practical way. Those who have followed Mr. McKay's literary work know that he has the unusual ability to describe a rather dry technical fact in a really interesting and easily understood manner. Consequently, we know at the outset that our readers, who are amateur motion-picture enthusiasts, will thoroughly enjoy "The Ciné Camera" and the volumes which will follow it.

AMERICAN ANNUAL OF PHOTOGRAPHY, 1931, Volume XLV, edited by Frank R. Fraprie. 292 Pages, 126 photographic illustrations. Price, cloth, $2.25; paper, $1.50. Boston: The American Photographic Publising Company.

Amateur and professional photographers always anticipate the arrival of the *American Annual*. In recent years this interesting annual has been increased in size, in the number of illustrations, and in the variety of text-matter. This year there has been another increase in the number of illustrations, and likewise in the number of articles. Apparently the publishers have realised the popular appeal produced by including a variety of pictorial illustrations. That is, we find still life, landscape, marine, portrait, architectural, modernistic, and design photography well represented. In fact, there are pictures in the 1931 annual which will interest beginners as well as salon exhibitors.

Among the articles there are a number by authors well known to PHOTO-ERA readers; namely, William S. Davis, C. B. Neblette, F.R.P.S., Dr. K. Koike, Warwick Barse Miller, Karl A. Barleben, Jr., Perry D. Frazer, Raymond E. Hanson, Frank H. Williams, and C. W. Gibbs. The variety in text material will likewise appeal to beginners and advanced pictorialists alike.

One feature which each year becomes of increasing interest is "Who's Who in Pictorial Photography". The present volume includes pictorialists in all parts of the world, who, during 1929–30, have made a name for themselves in the salons and exhibitions of the world. The value of this list is greatly increased by having each pictorialist's address given in full. This encourages correspondence between the pictorialists themselves and those who have enjoyed their pictures. The list of American Photographic Societies includes, this year, not only the amateur organisations, but the professional ones as well. This addition should prove of interest to many readers. The volume concludes with a number of formulas and other technical data of practical value. Altogether, the 1931 *American Annual* will prove to be well worth adding to one's photographic library.

"HY POE" sezs: A "vista" is an opening in the landscape through which one kin see a billboard.

Thru The Darkroom Door.

WHAT'S NEW?

A department reserved exclusively for the announcement and description of new photographic goods and services.

Home Talkies, Home Movies, Phonograph, and Radio in One Combination Instrument

AND now comes the last word in home entertainment! Home talkies, home movies, the radio, and the phonograph are all made available in one handsome combination instrument, the Filmophone-Radio, just announced by the Bell & Howell Company, Chicago.

B. & H. FILMOPHONE-RADIO

A Bell & Howell Filmo movie projector, utilising regular 16-millimeter home-movie-size film, is used for the pictures, and a Howard chassis is the basis of the radio feature—two products famed for quality in their respective fields. A phonograph motor is so arranged that the turntable can be operated at either the standard speed for ordinary phonograph records or thirty-three and a third revolutions per minute when the records for the sound-pictures are played.

The flexibility of the new combination instrument is such that talkies and also movies without sound can be projected. Again, the pictures may be shown with radio or phonograph musical accompaniments not synchronised with the film. Also, of course, the radio or phonograph are available each by itself, if desired.

A large number of home-talkie subjects can now be obtained from photographic dealers. Among these are the always amusing "Felix the Cat" cartoons, as well as numerous other entertaining and instructional features, including many of the famous UFA educational sound-pictures. It was the growing size of this list of available sound-movies that led logically to the development and announcement of the Filmophone-Radio.

Radio and phonograph combinations have already been worked out satisfactorily; but the additional problems involved in balancing the other units with the movie projector were not successfully solved until this instrument was evolved by Bell & Howell engineers.

Such a combination will unquestionably present the opportunity of entertaining the most critical home audiences. Here is a combination of quality, variety, and novelty, to say nothing of unlimited material from which to draw.

New Victor Animatophone Projector

A 16-MILLIMETER talking motion-picture projector—the first especially designed and constructed 16-millimeter sound projector to enter the field—has just been announced by Alexander F. Victor, president of the Victor Animatograph Corporation, Davenport, Iowa, pioneer manufacturers of non-theatrical motion-picture equipment.

This new apparatus consists of the newly designed Victor Model 5 Projector and the No. 33 "Animatophone". It is not, however, of the usual "hook-up" type, which employs an auxiliary, shaft-connected turntable in connection with a regular silent projector, but assembles into a one-unit, sound-on-disc synchroniser in which the turntable becomes an intimate part of the projector mechanism, being directly connected thereto.

The Model 5 Projector and the "Animatophone" were designed and perfected together as a single unit; but the present arrangement offers the advantage of its being possible to purchase the projector alone for silent operation and of later making the addition of the "Animatophone", which includes all parts necessary to complete the sound-equipment of the Model 5 Projector. The attachment of these parts is so simple that it may be easily accomplished by the owner, who will be spared the expense of returning his projector to the factory for fitting.

The outstanding feature of the "Animatophone" is the vertical instead of the usual horizontal disposition of the record, which achieves a new standard in compactness and light weight. The record thus revolves in a plane parallel to the side of the projector, or at right angles to the screen. The direct connection thereby afforded, minus flexible shafts and the like, gives such results as have never been obtained with separate, shaft-connected outfits. Preliminary demonstrations before motion-picture and sound experts have shown perfect clarity and constancy of tone.

Provision has been made in the projector for constantly maintaining an even speed, for adapting the speed to the requirements of both the

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33 1/3 R.P.M. and 78 R.P.M. records, for eliminating vibration, and preventing the transmission of extraneous sounds. Each of these features has been perfected with a deftness and ingenuity that are said to be always characteristic of Alexander F. Victor's inventions.

The normal electrical pick-up and arm are used, being counterbalanced in a special way, so that the needle comes in contact with the record at just the correct pressure for best reproduction. It is an interesting fact that the vertical disposition of the record and the scientific counterbalancing of the tone-arm induce a normal pressure which keeps the needle in a central position in the groove, with the result that it greatly increases the life of records. Although a perfect application of pressure sideways instead of up and down is accomplished by the counterbalance, its mechanism is not at all complicated; but, quite to the contrary, is an outstanding example of ingenious simplification. In fact, it is claimed that the system is highly superior for non-theatrical use because it combines simplicity with extreme efficiency.

The automatic air-governor, the disc-filter, the speed-adaptor, and the pick-up tension arrangement are all entirely new ideas conceived by the inventor, Alexander F. Victor, and will unquestionably contribute very largely to the future excellence of non-theatrical sound-reproduction.

The automatic air-governor is especially worthy of mention, because it embodies a unique idea and performs a highly important task—the maintenance of perfect uniformity of speed. The action of the governor is induced by a forced current of air impinging against a small vane which makes and breaks the contact in such a way that it is impossible for the motor to speed up or slow down, regardless of how much fluctuation there may be in the voltage of the line current. This one little feature has made it possible to use the regular projector motor and to thus eliminate the need for a large, heavy, synchronous type motor. The governor is designed to function perfectly at the two different speeds required for the 33 1/3 R.P.M. and the 78 R.P.M. records. A small indicator is set for the desired speed and, when this is done, no other adjustments for speed need be made.

The finest quality in projection, as well as in sound-reproduction, is ensured by the fact that none of the desirable and widely known features of the Victor Projector have been sacrificed in constructing this remarkable equipment.

Provision against damage to films—a highly regarded Victor feature—takes on added importance in connection with the use of synchronised film, which, in event of damage, requires expert laboratory splicing to prevent loss of synchronisation. Due to the Victor film-trip, which automatically cuts off power and light if the film fails to track properly, it is claimed that a film has never been known to break or become mangled during projection in a Victor projector.

The Victor adjustable shuttle, which is said to ensure permanent steadiness and quietness of operation, is another unique feature that seems to have been invented with "Talkies" in mind.

It is understood that any Victor Projector, Model 3 or 3B, may be returned to the Victor factory and, at a reasonable cost, be converted into a Model 5 for use with the "Animatophone".

In the standard Model 5 Victor Projector, maximum illumination and universal current adaption are provided for by a built-in transformer for 50–60 cycle A.C. operation. The current, however, may be diverted from the transformer, with the result that the instrument may be operated on either alternating or direct current, with or without Victor lamp rheostat. Thus, the equipment stands entirely alone in permitting the use intermittently of all the popular projection lamps—the standard 100–110 volt—200-watt, the high intensity 30 volt—165-watt, and the 20 volt—250-watt lamps.

This new "talkie" apparatus consists of only two units—the Animatophone-equipped Projector and an Amplifier-speaker. Two models of Amplifier-speakers are offered for use with the Animatophone. Both are especially designed units, in which only the highest type of well-known amplifiers and speakers are used. Amplifiers and speakers are compactly and efficiently assembled in a cleverly designed carrying case—the No. 245 being about the size of the Projector carrying case, and the No. 250 about half again as large.

It is anticipated by the manufacturers that the master Model 5 Projector and "Animatophone" will prove extremely popular with commercial, educational, and religious users of motion-pictures for the reason that it has no limitations, gives truly professional results, and is so compact and light in weight that it can be set up and operated in about a third of the space ordinarily required for 16-millimeter talkies, and may be transported with extreme ease.

Prominent advertisers and industrial motion-picture experts who have seen and heard the new "Animatophone" unanimously predict that the use of industrial "talkies" will become widespread with such perfected, economical apparatus now available.

The standard model, as has already been indicated, may be used with the 33 1/3 R.P.M. records and also with the 78 R.P.M. records. The 33 1/3 record runs slightly more than 14 minutes, while the 78s, which are the same as phonograph records, run only about five minutes.

Films with Sound Are Available

In this connection it is only apropos to mention that a good selection of short talkie subjects is already available for rental and purchase, and that a number of studios are specialising on short entertainment, novelty, and educational talkies which are intended for home, school, and church use. (See Victor Directory of Film Sources.) The industrial user will, of course, have his film and records made to order.

It is interesting to know that the "Animatophone" is just one of many outstanding ciné inventions by Mr. Victor. His inventive genius gave birth to the first 16-millimeter camera, and to such 16-millimeter camera refinements as the multiple-lens turret, the variable-speed mechanism, full-vision prism visual focusing, a new and revolutionary color system which is not yet on the market, many outstanding projector improvements, and some two hundred other major and minor ciné inventions.

In motion-picture circles it is said of Mr. Victor that when he sets his inventive genius to work

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in any particular direction, he is almost certain to surprise everyone with something radically new and different. Like the adventurer that he literally is, Mr. Victor delights in straying far from the "beaten path", and in emerging with some refinement or innovation of striking simplicity and practicability. His latest achievement, the "Animatophone", is an equipment that would seem to indicate that Mr. Victor is due to win just as many laurels in the "talkie" field as he has in the "silent".

New Portable Talkie Reproducer with Special Microphone Feature

A SPECIAL microphone arrangement which will enable the operator to interject remarks relative to any picture which is being shown, and to have his voice come from the loud speaker in entirely satisfactory volume, is hailed as a revolutionary feature of the new Bell & Howell portable 16-millimeter talkie reproducer, the Filmophone.

This new combination is especially valuable for business, educational, church and small theatre use. It will also be warmly welcomed in the home.

The Filmophone itself is absolutely portable, in the true sense of that word. It comes in two cases, of approximately equal size, shape, and weight, totaling 88 pounds. It employs a Filmo Projector for showing pictures, using 16-millimeter amateur size film. Sound is obtained by a synchronised phonograph type of disc, the same as used in theaters.

The Filmophone, it is stated, presents the ultimate in tonal qualities in portable sound-movie reproducers. It produces volume sufficient for audiences of several thousands. With it, perfect

B. & H. FILMOPHONE

synchronisation is achieved with greatest ease. It has a worm drive of unique design, thus eliminating the double-motor feature and avoiding any possibility of slack in the mechanical coupling, which would, of course, destroy synchronisation. The Filmophone is a product of the Bell & Howell engineering laboratories and carries with it the Bell & Howell manufacturing guarantee.

The microphone feature permits the operator to plug in conveniently at any time, automatically cut out the musical or verbal record accompaniment, and make any comments desired in order to emphasise points of a film which may need stressing to meet a specific situation. When a switch on the microphone is released, the record sound accompaniment is resumed.

A notable advantage of this microphone arrangement lies in the fact that it will obviously make it possible to use many silent pictures to good advantage. A salesman, for instance, can talk into the microphone while showing a silent film and explain his company's product and have his voice accompany the picture in a volume equal to that of the Filmophone when it is presenting a sound picture, so that a large audience can hear him easily. The Filmophone will be marketed with the microphone attachment, or it may be secured without the microphone feature, which can then be added later.

One of the two cases which house the Filmophone contains turntable with flexible shaft connections to the Filmo Projector, magnetic pick-up, amplifier with power pack, tubes, needles, needle cup, pocket for three 16-inch records, and necessary accessories. The second case houses the loud speaker permanently mounted in the case itself, together with the projector, three extra reels of film, empty reel, connecting cords, cables, and accessories.

A New Correctoscope

THE Hugo Meyer Optical Company announce a new Correctoscope. The new model has a larger lens, prism, and ocular than the old model and comes into and out of focus more quickly, making possible a more accurate measure of distance.

The new model attached to your motion-picture camera will add greatly to the pleasure you will derive from motion-picture photography. It shows you the full field of view, and may be set to correspond with the field of view of the taking lens, so that you may watch the action framed by the aperture, thus enabling you to know just what you are photographing.

The one device provides you with a distant meter, showing the distance of any subject; an exposure meter, giving you the proper diaphragm setting for your exposure, and a finder. The Hugo Meyer Optical Company of New York will be glad to supply full information regarding the new Correctoscope, as well as information regarding their Plasmat lenses and sets.

Our Native Land

A BRIDEGROOM to whom I bade farewell three weeks ago, as he departed on his honeymoon, is back in town with snapshots of the scenic and historic spots they visited. They include, among many others:

The Bride on the Greater Buffalo.
The Bride at Niagara Falls.
The Bride on the Maid of the Mist.
The Bride at Mount Vernon.
The Bride before the Capitol.
The Bride on a Mountain.
The Bride beside the Liberty Bell.
The Bride at Valley Forge.
The Bride on the shore of the Atlantic Ocean.

The sights everywhere were simply marvelous, the young man declares. He had no idea before that our country was so beautiful.

Thru The Darkroom Door.

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THE AMATEUR KINEMATOGRAPHER

HERBERT C. McKAY, F.R.P.S.

The Film Library

PERHAPS there is no piece of furniture so indispensable in all homes of culture as is the bookcase. This may be small, in some circumstances; but, as we know, it means, as a rule, shelves upon shelves of those books which we love, those which we use for more utilitarian purposes, and those which we seldom touch. But whatever their use, they are cared for, kept in order, and we can go to the shelves in the dark and place our hands upon any wanted volume.

How does this compare with your film library? Have you stopped to think that your films constitute a library of the utmost value, a library where the messages are delivered to you directly and not through the medium of the printed word? True, many of the films are homemade; but are there many volumes which we cherish more carefully than our diaries?

Do you care for your library? your film library? If you do not, why do you not? Perhaps your first thought is that your films are not good enough to be given this trouble. It is true that when films which are out of focus or grossly underexposed or overexposed are included, little can be done; but barring these two very common faults, there are few if any films in your collection which cannot be made into worth-while films. All that you have to consider is this very important point: The books in your library are delivered to you complete; your films—at least, your own private films—have to be made *by you!* When the film is processed and delivered to you, you have but rough—very rough—galley proofs, so to speak; proofs which have to be edited, for few amateurs can edit films in the making. There is no time in the year better suited for editing than these long winter evenings when the wind is howling out of doors and you don't like the idea of going out.

In the first place, select about six spools of film for the first evening. Select six which can be attached together to make one full reel of film, which will be in something approaching orderly sequence. What's that? There are only *four* spools in a reel? Well, if you edit these six spools and do it right, you can put all of the remainder on one reel and have room left for titles!

It might be added right here, that if you are going to enjoy editing you must have the proper facilities. There are many "gadgets" which are convenient, but not necessary; but for proper editing, the machine is essential. The machine holds the reels of film, allows you to rewind in either direction at will, to examine the film, frame by frame. It shows you the frame right side up, magnified to a size easy to see, and shows it illuminated in a room where the general illumination may be bright or dim, as you please. When the point of parting the film is found, the splicer immediately beneath the viewer makes cutting and splicing a matter of seconds.

Take your first reel, and start it through the viewer. Roll the film along slowly. When the first frames of action appear, the chances are that the action will be blurred, and also that the action which is there has little interest. When you find the beginning of the interest, and good steady film, cut it at that frame. Pull that scene through the viewer. At the end, look at it carefully and again cut the film at the first suggestion of inferiority due either to blur or loss of interest. Cut the film here and place that scene aside. Proceed through the entire film in this manner. *Cut every scene from the rest of the film!* This is essential, or you will be tempted to pass over some bad scene ends. When the six reels have been cut into the separate scenes, you should have not more than fifty nor less than twenty-five scenes, and a wastebasket more or less full of discarded film.

Cut a sheet of letter paper in two, lengthwise, giving two pieces 4¼ x 11 inches. Apply paste to one long edge for about ¼-inch. Roll the other edge over and paste to this. You will have a tube of paper slightly more than one inch in diameter. Cut this into bands a half-inch wide, each tube supplying twenty-two of these. These are editing bands. Pass each scene through the viewer for identification. Write the name of the scene upon a band. Roll it up and place the band over it. When this has been done for each scene, you will have all scenes rolled neatly and labeled for instant reference.

Prepare a leader from black film or any other film available. If you have the special leaders now available, so much the better. These specials have a space for the name of the film and other data printed upon them. Attach this to a take-up reel. Cement the first scene to the leader, making sure that the heads of the scene point toward the leader. Proceed through the pile of scenes, splicing each to the next; and when you have finished, attach about two or three feet of black or other dark blank film for a trailer.

Now project this film. You are due for a great surprise; for the improvement made by this simple operation is truly astounding. In a later number you will be told just how to edit films in a truly professional manner; but at this time, the foregoing is sufficient.

This elementary editing of your films will probably occupy your spare time for a month or more, and when it is all done you are ready to give attention to your library. One thing must be borne in mind. You will have some subjects unrelated to any others. These should be kept in the single-spool size, while of others there will be only two. In any event, do not splice unrelated films. As a

result, you will have films of all lengths. These may be kept upon reels whose capacity is one hundred, two hundred, or four hundred feet. All of these sizes are available in good quality aluminum reels; so that you will have no excuse to retain the unattractive laboratory spools.

After you have the films properly placed upon reels, start your index. There are a variety of film-cases on the market. These may be metal cans, boxes in the form of books, or leather box cases. In any event, if the box itself is not provided with a humidifying pad, keep the films in humidor cans and keep these cans in any convenient case.

If the special leaders are used, care need not be taken to always rewind upon the proper reel, and the leader, not the reel, bears the library index. Have an index book or sheet which is always available. Then when you want any particular film, you can put your hand upon it without delay.

The films in your library should be given the best of care. They should be kept properly humidified. The humidor pads may be kept saturated with water, but the special humidifying solutions are to be preferred. The films should be periodically inspected for torn perforations and similar defects. These should be instantly remedied, when found, by cutting out the defective frame and splicing the film.

Film should be cleaned periodically. Any of the film-cleaning solutions on the market may be used. The cleaner may be attached to one of the well-known projectors, or it may be one of the extensively advertised film-cleaning machines. If the film is edited, and is kept humidified, patched, and clean, it will give you the utmost in service and will have a long life. Give your film-library a chance!

Cabinets and Movies

Did you have a radio "bug" in your home about fifteen years ago? Do you remember the old kitchen-table with a mass of wires strung over it, the ungainly "loose-coupler", the crystal detector, the tuning coil—at times three feet high—the batteries which came with the audion tube, and the general mass of junk? Then those huge old variable condensers of strange and monstrous form! What a time we had then! But the junk was shoved out of sight in a closet or attic. Mother couldn't have that mess where company might see it!

What a difference today, when the radio is often the finest piece of furniture in the room. Now we throw a switch, carelessly twirl a dial, and we have exquisite music!

But home movies? Well, we still have to lug out a mass of machinery and other impedimenta; consequently we are forced to forego movies often when we should really enjoy them. There is only one salvation in view—an answer to the problem which was foretold five years ago. Movies *must* come to the furniture idea. Strangely, the advent of the home talkie, with its concomitant phonograph mechanism, has led the way, and this winter has seen two cabinet models introduced, both of which will inevitably be welcomed as the answer to the problem.

The Pathex combination is housed in a beautiful cabinet which will rival the most expensive cabinets in grace of design and quality. Incidentally, the writer wishes to state that, in his opinion, the 9.5-millimeter film has not been given the attention which it deserves. This combination uses the standard Pathex Super-reel projector, synchronised with a turntable which uses the Pathé theatrical records. At a demonstration, this machine gave a beautifully clear forty-inch picture—quite large enough for any home use—and the sound was quite up to the theatrical quality. The pick-up is a regular theater model of the best make, and this, in conjunction with the theater record, gives truly professional sound. As a matter of fact, there have been several productions on Broadway during the past year which were inferior to the results given by this wonderful little outfit.

Through ingenious design, the entire mechanism is easily accessible for operation; yet it may be entirely closed during projection, a small door about four by six inches being left open for the projected beam to pass through.

As this outfit, complete, sells for less than many silent projectors, it should find the utmost popularity.

Another "cabinet job" is that made by Bell and Howell. This is not a makeshift combination built up of odd parts, as some combinations of the past have been, but a complete unit, especially designed for this work and housed in a beautiful Gothic cabinet. The top of the cabinet lifts up to make the turntable accessible, just as in radio-phonograph combinations. The side door of the cabinet opens to give accessibility to the projector, and a door in front may be opened during projection, leaving the rest of the cabinet closed. An additional feature is the incorporation of a radio of the latest model. Thus the one unit gives radio, electrically reproduced phonograph service, talkies, or still projection.

This combination reflects the coming trend in motion-picture equipment for the home, and it is only a question of time until the home projector will be cabinet housed, and the open model will be as obsolete as the old open-table radio.

The coming of the home talkie marks a real advance in home-movie art. Not that the synchronised library records are the only worth-while film productions—far from it; but we are now on the verge of two important advances—home recording and home matching.

How far has this advanced? The writer has within the past three months made synchronised film and disc with 16-millimeter film, both successful and both simple enough for the amateur—and both inexpensive enough to be within the reach of the great army of amateurs! Details cannot be given at this time; but when spring comes, you will have it within your power to make your own talkies!

Incidentally, home recording alone has received quite a boost recently, with several radio-combinations coming out with home-recording equipment; but for synchronous work a special device is necessary. It may be said, however, that discs will be available which do not have to be duplicated by expensive stamping methods, but which can be replayed as soon as made and which have a satisfactorily long life.

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The Animatophone

Do you happen to have the pleasure of knowing A. F. Victor? If not, you have missed something in life. However, even if you do not, you know his work—for in motion-picture design it seems that it is he who leads with original ideas which are practical. This sounds like the introduction of an after-dinner speaker; but a little reflection will show its truth. Checking back through the past ten years will show more revolutionary ideas made practical by Victor than by all the other designers together.

This leads us to the latest one—the Animatophone, the Victor projector for synchronised reproduction of disc-film records.

The great objection, heretofore, to all such equipment has been the size and bulk. The table, at least 12 inches in diameter—and 16 inches if professional records are to be used—must lie horizontally and be connected to the projector. A large table was necessary to support the equipment, and the weight of the outfit placed it on the verge of non-portability.

With the advent of the Animatophone we have a projector for 16-inch professional discs which operates perfectly, which is slightly larger than the usual projector, and which is as portable as any home projector. This is accomplished by supporting the record in a vertical position and running it in the same position. A complete description of this equipment will be found elsewhere in this issue.

Bobby Jones "Filmoed" by Prince of Wales

THE Prince of Wales is an enthusiast on the subject of making golf movies, according to *Golfdom* magazine, and used his own personal Filmo movie camera to make pictures of Bobby Jones when the latter was playing in Britain last summer.

The Prince is also greatly interested in the project which the Professional Golfers Association of America has been carrying through, of making super-slow golf demonstration movies of such stars as Jones, Vardon, and Wethered.

After he learned of the making of some of these movies in England, he requested that a complete set be sent to him at the earliest possible moment. This was done by George Sargent, a director of the Association, who was abroad for some time in connection with making the Vardon and Wethered golf pictures. At the same time, Mr. Sargent transmitted to His Royal Highness an invitation to attend the Ryder Cup International Professional Matches at Scioto Country Club, Columbus, Ohio, next summer.

Russian Travel and Educational Films Made Available in 16-mm.

THE exceptional quality of Russian travel and educational films thus far introduced into this country has aroused widespread favorable attention from American film-critics, educators, and the motion-picture world generally.

Thus far, the presentation of Russian pictures, except for a few features like "Potemkin" and "The Fall of St. Petersburg", which enjoyed runs at Roxy's Theater in New York City, has been limited to some of the smaller movie houses in the larger cities, due to the fact that the general theatrical market has not been favorable to full-length films of this nature. Consequently, some extraordinarily fine films have been inaccessible to the American public generally, and especially to the home, church, and school fields, where such material is most desirable.

An effective remedy is now offered by the Bell & Howell Company which has prepared one and two-reel versions, on 16-millimeter film, of some of Amkino's best productions.

Among these new Bell & Howell releases is a two-reel picture of life among the primitive family tribes of a tiny forest people, the Ussurians. Their mode of getting a living by skillful hunting and fishing, their social division of labor between the sexes, and, finally, the influence of Western civilisation in bringing commendable changes to these backward, simple people are arrestingly portrayed. One of the most interesting moments shows the excitement of a native when he sees himself in the movies for the first time. This film, which is entitled "Taming the Taiga", ranks with the best socio-naturalist films and is of compelling interest for home, school, and church showing.

Another of these releases is the one-reeler "Hunting and Fishing in Siberia", which is of special interest to the lovers of unusual sport and travel films, and which includes the killing of a giant bear by a native single-handed and armed only with a spear.

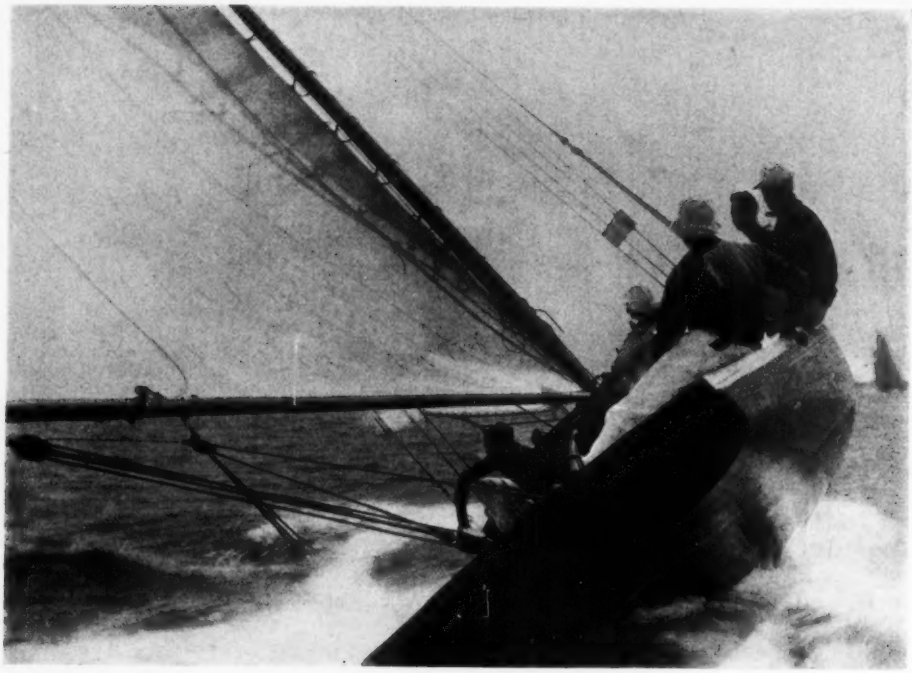
A third release is a one-reeler on Afghanistan, reported to be the only motion-picture ever made with the consent of the Afghan authorities. The extremely primitive methods of agriculture are plainly and interestingly shown, likewise the towns with their crowded bazaars and busy handicraftsmen; also camel, elephant, and buffalo transport; ruins of ancient temples; and then, the surprising forced draft of modernity introduced by the ill-fated King Amanullah. Travel interest, humor, and educational value are skillfully blended.

Cellulose Acetate Used in Films

CELLULOSE acetate is now being made in such quantities that it is available for commercial uses, according to an announcement by the Du Pont Rayon Company. Research chemists, studying the product, state that there are many uses for it in industry, besides those to which it has already been applied. It is now being employed in the manufacture of noninflammable photographic film.

This chemical product of little commercial importance prior to 1914 was brought sharply to attention during the World War, when it was used to develop a dope which was noninflammable and thus could protect the wings of airplanes from the dangers of incendiary bullets. One of the recent new uses for it has been for coating wire screen to be used for windows in poultry farms, solariums, and other like places. In these instances its ability to transmit ultra-violet rays is important. It is not inflammable, and no special storage is required.

XUM



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